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HENRY DRUMMOND.

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HE had been in many places over the world and seen strange sights, and taken his share in various works, and, being the man he was, it came to pass of necessity that he had many friends. Some of them were street Arabs, some were negroes, some were medicals, some were evangelists, some were scientists, some were theologians, some were nobles. Between each one and Drummond there was some affinity, and each could tell his own story about his friend. It will be interesting to hear what Professor Greenfield or Mr. Moody may have to say; but one man, with profound respect for such eminent persons, would prefer to have a study of Drummond by Moolu, his African retainer. Drummond believed in Moolu, not because he was "pious"—which he was not—but because "he did his duty and never told a lie." From the chief's point of view, Moolu had the final virtue of a clansman—he was loyal and faithful: his chief, for that expedition, had beyond most men the necessary endowment of a leader, a magnetic personality. It is understood that Drummond's life is to be written at large by a friend, in whose capable and wise hands it will receive full justice, but in the meantime it may not be unbecoming that one should pay his tribute who has his own qualification for this work of love. It is not

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that he is able to appreciate to the full the man's wonderful genius, or accurately to estimate his contributions to scientific and religious thought—this will be done by more distinguished friends—but that he knew Drummond constantly and intimately from boyhood to his death. If one has known any friend at school and college, and in the greater affairs of life has lived with him, argued with him, prayed with him, had his sympathy in the supreme moments of joy and sorrow, has had every experience of friendship except one—it was not possible to quarrel with Drummond, although you might be the hottest-tempered Celt on the face of the earth—then he may not understand the value of his friend's work, but at any rate he understands his friend. As one who knew Henry Drummond at first hand, my desire is to tell what manner of man he was in all honesty and without eulogy. If anyone be offended then, let him believe that I wrote what I have seen, and if anyone be incredulous, then I can only say that he did not know Drummond.

His body was laid to rest a few weeks ago, on a wet and windy March day, in the most romantic of Scottish cemeteries, and the funeral, on its way from the home of his boyhood to the Castle Rock of Stirling, passed the King's Park. It was in that park more than thirty years ago that I first saw Drummond, and on our first meeting he produced the same effect as he did all his after life. The sun was going down behind Ben Lomond, in the happy summer time, touching with gold the gray old castle, deepening the green upon the belt of trees which fringed the eastern side of the park, and filling the park itself with soft, mellow light. A cricket match between two schools had been going on all day and was coming to an end, and I had gone out to see the result—being a new arrival in Stirling, and full of curiosity. The two lads at the wickets were in striking contrast—one heavy, stockish, and determined, who slogged powerfully and had scored well for his side; the other nimble, alert, graceful, who had a pretty but uncertain play. The slogger was forcing the running in order to make up a heavy leeway, and compelled his partner to run once too often. "It's all right, and you fellows are not to cry shame"—this was what he said as he joined his friends—"Buchanan is playing A1, and that hit ought to have been a four; I messed the running." It was good form, of course, and what any decent

lad would want to say, but there was an accent of gaiety and a certain air which was very taking. Against that group of clumsy, unformed, awkward Scots lads this bright, straight, living figure stood in relief, and as he moved about the field my eyes followed him, and in my boyish and dull mind I had a sense that he was a type by himself, a visitor of finer breed than those among whom he moved. By-and-by he mounted a friend's pony and galloped along the racecourse in the park till one only saw a speck of white in the sunlight, and still I watched in wonder and fascination—only a boy of thirteen or so, and dull—till he came back, in time to cheer the slogger who had pulled off the match—with three runs to spare—and carried his bat.

“Well played, old chap!” the pure, clear, joyous note rang out on the evening air, “finest thing you’ve ever done,” while the strong-armed, heavy-faced slogger stood still and looked at him in admiration, and made amends. “I say, Drummond, it was my blame you were run out . . .” Drummond was his name, and someone said “Henry.” So I first saw my friend.

What impressed me that pleasant evening in the days of long ago I can now identify. It was the lad's distinction, an inherent quality of appearance and manner of character and soul which marked him and made him solitary. What happened with one strange lad that evening befell all kinds of people who met Drummond in later years. They were at once arrested, interested, fascinated by the very sight of the man, and could not take their eyes off him. Like a picture of the first order among ordinary portraits he unconsciously put his neighbors at a disadvantage. One did not realize how commonplace and colorless other men were till they stood side by side with Drummond. Upon a platform of evangelists, or sitting among divinity students in a dingy classroom, or cabined in the wooden respectability of an ecclesiastical court, or standing in a crowd of passengers at a railway station, he suggested golden embroidery upon hoddie gray. It was as if the prince of one's imagination had dropped in among common folk. He reduced us all to the peasantry.

Drummond was a handsome man, such as you could not match in ten days' journey, with delicately cut features, rich auburn hair, and a certain carriage of nobility, but the distinctive and commanding feature of his face was his eye. No photo-

graph could do it justice, and very often photographs have done it injustice, by giving the idea of staringness. His eye was not bold or fierce; it was tender and merciful. But it had a power and hold which were little else than irresistible and almost supernatural. When you talked with Drummond he did not look at you and out of the window alternately, as is the usual manner, he never moved his eyes and gradually their penetrating gaze seemed to reach and encompass your soul. It was as Plato imagined it would be in the judgment; one soul was in contact with another—nothing between. No man could be double, or base, or mean, or impure before that eye. His influence, more than that of any man I have ever met, was mesmeric—which means that while other men affect their fellows by speech and example, he seized one directly by his living personality. As a matter of fact, he had given much attention to the occult arts, and was at one time a very successful mesmerist. It will still be remembered by some college companions how he had one student so entirely under his power that the man would obey him on the street and surrender his watch without hesitation, and it was told how Drummond laid a useful injunction on a boy in a house where he was staying and the boy obeyed it so persistently afterwards that Drummond had to write and set him free. Quite sensible and unromantic people grew uneasy in his presence, and roused themselves to resistance—as one might do who recognized a magician and feared his spell.

One sometimes imagines life as a kind of gas of which our bodies are the vessels, and it is evident that a few are much more richly charged than their fellows. Most people simply exist completing their tale of work—not a grain over; doing their measured mile—not an inch beyond; thinking along the beaten track—never tempted to excursions. Here and there in the world you come across a person in whom life is exuberant and overflowing, a force which cannot be tamed or quenched. Drummond was such an one, the most vital man I ever saw, who never loitered, never wearied, never was conventional, pedantic, formal, who simply revelled in the fulness of life. He was so radiant with life that ordinary people showed pallid beside him, and shrank from him or were attracted and received virtue out of him. Like one coming in from the light and open air into a stuffy room where a company had been sitting with closed

windows, Drummond burst into bloodless and unhealthy coteries, bringing with him the very breath of heaven.

He was the Evangelist to thoughtful men—over women he had far less power—and his strength lay in his personality. Without anecdotes or jokes, or sensationalism or doctrine, without eloquence or passion, he moved young men at his will because his message was life, and he was its illustration. His words fell one by one with an indescribable awe and solemnity, in the style of the Gospels, and reached the secret place of the soul. Nothing more unlike the ordinary evangelistic address could be imagined: it was so sane, so persuasive, so mystical, so final. It almost followed, therefore, that he was not the ideal of a popular evangelist who has to address the multitude, and produce his effect on those who do not think. For his work, it is necessary—besides earnestness, which is taken for granted—to have a loud voice, a broad humor, a stout body, a flow of racy anecdote, an easy negligence of connection, a spice of contempt for culture, and pledges of identification with the street in dress and accent. His hearers feel that such a man is homely and is one of themselves, and, amid laughter and tears of simple human emotion, they are moved by his speech to higher things. This kind of audience might regard Drummond with respectful admiration, but he was too fine a gentleman, they would consider, for their homespun. Place him, as he used to stand and speak, most perfectly dressed both as to body and soul, before five hundred men of good taste and fine sensibilities, or the same number of young men not yet cultured but full of intellectual ambitions and fresh enthusiasm, and no man could state the case for Christ and the soul after a more spiritual and winsome fashion. Religion is without doubt the better for the popular evangelist, although there be times when quiet folk think that he needs chastening; religion also requires in every generation one representative at least of the higher evangelism, and if anyone should ask what manner of man he ought to be, the answer is to his hand—Henry Drummond.

When one admits, without reserve, that his friend was not made by nature to be a successful officer of the Salvation Army, it must not be understood that Drummond was in any sense a superior person, or that he sniffed in his daintiness at ordinary humanity—a spiritual Matthew Arnold. It would strain my

conscience to bear witness that working people, say, however much they loved him, were perfectly at home with him, and it is my conviction, from observation of life, that this is an inevitable disability of distinction. One may be so well dressed, so good looking, so well mannered, so spiritually refined, that men with soiled clothes and women cleaning the house may realize their low estate, and miss that freemasonry which at once by a hundred signs unites them in five minutes with a plainer man. While this may have been true, the blame was not his, and no man lived who had a more unaffected interest and keener joy in human life in the home or on the street. No power could drag him past a Punch-and-Judy show—the ancient, perennial, ever-delightful theatre of the people—in which, each time of attendance, he detected new points of interest. He would, in early days if you please, gaze steadfastly into a window, in the High Street of Edinburgh, till a little crowd of men, women, children, and workmen, loafers, soldiers, had collected, and join with much zest in the excited speculations regarding the man—unanimously and suddenly imagined to have been carried in helpless—how he met with his accident, where he was hurt, and whether he would recover, listening eagerly to the explanation of the gathering given by some officious person to the policeman, and joining heartily in the reproaches levelled at some unknown deceiver. One of his chosen subjects of investigation, which he pursued with the zeal and patience of a naturalist, was that ever-interesting species—the Boy, whom he studied in his various forms and haunts: at home for the holidays, on the cricket field, playing marbles on the street with a chance acquaintance while two families wait for their food, or living with many resources and high enjoyment in a barrel. There was nothing in a boy he did not know, could not explain, did not sympathize with, and so long as it lasts his name will be associated with the Boys' Brigade. While any other would only have seen two revellers in a man and woman singing their devious way along the street at night, Drummond detected that a wife, who had not been drinking, was luring her husband home by falling in with his mood and that before it was reached she might need a friendly hand. His sense of humor was unerring, swift and masterful. If he came upon a good thing in his reading he would walk a mile to share it with a friend, and afterwards de-

part in the strength thereof, and he has been found in his room exhausted with delight with nothing before him but one of those Parisian plaster caricatures of a vagabond. Lying on his back in the pitiable helplessness and constant pain of those last two years, he was still the same man.

“Don’t touch me, please; I can’t shake hands, but I’ve saved up a first-rate story for you,” and his palate was too delicate to pass anything second-rate. Partly this was his human joyousness, to whom the absurdities of life were ever dear, partly it was his bravery, who knew that the sight of him brought so low might be too much for a friend. His patience and sweetness continued to the end, and he died as one who had tasted the joy of living and was satisfied.

His nature had, at the same time, a curious aloofness and separateness from human life, which one felt, but can hardly describe. He could be severe in speaking about a mean act or one who had done wickedly, but in my recollection he was never angry, and it was impossible to imagine him in a towering passion. He was profoundly interested in several causes, but there was not in him the making of a fanatical or headlong supporter. None could be more loyal in the private offices of friendship, but he would not have flung himself into his friend’s public quarrel. In no circumstances would he be carried off his feet by emotion or be consumed by a white heat of enthusiasm. He was ever calm, cool, self-possessed master of himself, passionless in thought, in speech, in action, in soul. Were you in trouble he had helped you to his last resource, and concealed if possible his service; but of you, in his sore straits, he would have neither asked nor wished for aid. Many confidences he must have received; he gave none; many people must have been succored by him; none succored him till his last illness. Towards women, who are the test and revelation of men, he was ever chivalrous, but he left the impression on your mind that neither they nor their company—there may have been exceptions—attracted or satisfied him. He was too courteous a gentleman to give any sign, but one guessed that a woman’s departure from the room meant to him no loss and was rather a relief. One was certain that he was loved; one was quite certain that he would never marry. So sexless was he towards women, so neutral towards men, so void of the elemental passions, which go to make the

color and tragedy of life, yet so noble and true was he, that one regarded him at times with awe, and for a moment thought of him as a being of another race, mingling with our life in all kindness, yet maintaining and guarding his other world integrity.

This is at least perfectly certain that from his youth he refused to have his life arranged for him, but jealously and fearlessly directed it by his own instincts, refusing the brown, beaten paths wherein each man, according to his profession, was content to walk, and starting across the moor on his own way. Nothing can be more conventional than the career of the average Presbyterian minister who comes from a respectable religious family, and has the pulpit held up before him as the ambition of a good Scots lad; who is held in the way thereto by various traditional and prudential considerations, and better still—as is the case with most honest lads—by his mother's wishes; who works his laborious, enduring way through the Divinity Hall, and is yearly examined by the local Presbytery; who at last emerges into the butterfly life of a Probationer, and is freely mentioned, to his mother's anxious delight, in connection with "vacancies"; who is at last chosen by a majority to a pastorate—his mother being amazed at the blindness of the minority—and settles down to the routine of the ministry in some Scotch parish with the hope of Glasgow before him as a land of promise. His only variations in the harmless years might be an outburst on the historical reality of the Book of Jonah—ah me! did that stout middle-aged gentleman ever hint that Jonah was a drama?—which would be much talked of in the common room and, it was whispered, reached the Professor's ears; and afterwards he might propose a revolutionary motion on the distribution of the Sustentation Fund. Add a hand-book for Bible-classes on the Prophecy of Malachi, and you have summed up the adventures of his life. This was the life before Drummond when he entered the University of Edinburgh in 1866, and it ought to be recorded that he died an ordained minister and Professor of the Kirk, so that he did not disappoint his home, nor become an ecclesiastical prodigal—but with what amazing variations did he invest the years between! What order he took his classes in no one knew, but he found his feet in natural philosophy and made a name in geology. His course at the New

College he completed in three years and one year, with two years' evangelistic touring between; and he once electrified the students by a paper—it seems yesterday, and I know where he stood—which owed much to Holmes and Emerson, but revealed his characteristic spiritual genius. His vacations he spent sometimes in tutorships, which yielded wonderful adventures, or at Tübingen, where his name was long remembered. As soon as Moody came to Edinburgh, Drummond allied himself with the most capable, honest, and unselfish evangelist of our day, and saw strange chapters in religious life through the United Kingdom. This was the infirmary in which he learned spiritual diagnosis. For one summer he was chaplain at Malta; in another he explored the Rockies; he lived five months among the Tanganyika forests, where he sent me a letter dated Central Africa, and mentioning, among other details, that he had nothing on but a helmet and three mosquitoes. He was for a time assistant in an Edinburgh church, and readers of the illustrated papers used to recognize him in the vice-regal group at Dublin Castle. His people at home—one could trace some of his genius and much of his goodness to his father and mother—grew anxious and perplexed; for this was a meteoric course for a Free Kirk minister, and stolid acquaintances—the delicious absurdity of it—remonstrated with him as one who was allowing the chances of life to pass him, and urged him to settle. His friends had already concluded that he must be left free to fulfil himself, but knew not what to expect when he suddenly appeared as a lecturer on Natural Science in the Free Church College of Glasgow, and promptly annexed a workingmen's church. Afterwards, his lectureship became a chair, and he held it to the end, although threatened with charges of heresy and such like absurdities. You might as well have beaten a spirit with a stick as prosecuted Drummond for heresy. The chair itself was a standing absurdity, being founded in popular idea to beat back evolution and to reconcile religion and science, but it gave Drummond an opportunity of widening the horizon of the future ministry and infusing sweetness into the students' minds. He may have worn a white tie on Sunday duty at his church, but memory fails to recall this spectacle, and he consistently refused to be called Reverend—declaring (this was his fun) that he had no recollection of being ordained, and

that he would never dare to baptize a child. The last time he preached was about 1882, in my own church, and the outside world did not know that he was a clergyman. From first to last he was guided by an inner light which never led him astray, and in the afterglow his whole life is a simple and perfect harmony.

Were one asked to select Drummond's finest achievement, he might safely mention the cleansing of student life at Edinburgh University. When he was an arts student, life in all the faculties, but especially the medical, was reckless, coarse, boisterous, and no one was doing anything to raise its tone. The only visible sign of religion in my remembrance was a prayer meeting attended by a dozen men—one of whom was a canting rascal—and countenance from a professor would have given a shock to the university. Twenty years afterwards six hundred men, largely medicals, met every Sunday evening for worship and conference under Drummond's presidency, and every evening the meeting was addressed by tutors and fellows and other dignitaries. There was a new breath in academic life—men were now reverent, earnest, clean living and clean thinking, and the reformer who wrought this change was Drummond. This land, and for that matter the United States, has hardly a town where men are not doing good work for God and man to-day who have owed their lives to the Evangel and influence of Henry Drummond.

When one saw the unique and priceless work which he did, it was inexplicable and very provoking that the religious world should have cast this man, of all others, out, and have lifted up its voice against him. Had religion so many men of beautiful and winning life, so many thinkers of wide range and genuine culture, so many speakers who can move young men by hundreds towards the Kingdom of God, that she could afford or have the heart to withdraw her confidence from Drummond? Was there ever such madness and irony before Heaven as good people lifting up their testimony and writing articles against this most gracious disciple of the Master, because they did not agree with him about certain things he said, or some theory he did not teach, while the world lay round them in unbelief and selfishness, and sorrow and pain? "What can be done," an eminent evangelist once did me the honor to ask, "to heal the breach between the religious world and Drummond?" And I dared to reply that in my poor judgment the first step ought

to be for the religious world to repent of its sins, and make amends to Drummond for its bitterness. The evangelist indicated that, so far as he knew his world, it was very unlikely to do any such becoming deed, and I did not myself remember any instance of repentance on the part of the Pharisees. Then, growing bold, I ventured to ask why the good man had not summoned Drummond to his side, as he was working in a university town, and knew better than any other person that he could not find anywhere an assistant so acceptable or skilful. He agreed in that, but declared at once that if Drummond came his present staff would leave, and that two men could not do all the work, which seemed reasonable, and besides every man knows his own business best, and that evangelist knew his remarkably well. Nothing more remained to be said, and I rose to leave. At the far end of the room some of the staff were talking together. "I gave them a 'straight talk' at the men's meeting last night, and then we had such a sweet little 'sing' and thirty souls dropped in." A young man of the better class was speaking, and I looked at the weak, self-satisfied face, but it is not necessary to write down my reflections as I left the place. Never did my friend say one unkind word of the world which condemned him, but it may be allowed to another to say that if anyone wishes to indict the professional religionists of our time for bigotry and stupidity, painful and unanswerable proof lies ready to his hand in the fact that the finest evangelist of the day was treated as a Samaritan.

One, of course, remembers that Drummond's critics had their reasons, and those reasons cast interesting light on his theological standpoint. For one thing, unlike most evangelists, it was perfectly alien to this man to insist on repentance, simply because he had not the painful and overmastering sense of sin which afflicts most religious minds, and gives a strenuous turn to all their thinking. Each thinker conceives religion according to his cast of mind and trend of experience, and Christianity to Drummond was not so much a way of escape from the grip of sin, with its burden of guilt and loathsome contact, as a way of ethical and spiritual attainment. The question he was ever answering in his writing and speaking was not how can a man save his soul, but how can a man save his life. His idea of salvation was rising to the stature of Christ and sharing His simple, lowly,

peaceful life. This was the text of his brochures on religion, which charmed the world from "The Greatest Thing in the World" to "The City Without a Church." It is said even they gave offence to some ultra-theological minds—although one would fain have believed that such persuasive pleas have won all hearts—and I have some faint remembrance, perhaps a nightmare, that people published replies to the eulogy of Love. It was quite beside the mark to find fault with the theology in the little books, because there was none and could be none, since there was none in the author. Just as there are periods in the development of Christianity, there are men in every age corresponding to each of the periods—modern, Reformation, and Mediæval minds—and what charmed many in Drummond was this, that he belonged by nature to the pre-theological age. He was in his habit and thought a Christian of the Gospels, rather than of the Epistles, and preferred to walk with Jesus in Galilee rather than argue with Judaizers and Gnostics. It would be a gross injustice to say that he was anti-theological: it would be correct to say that he was non-theological. Jesus was not to him an official Redeemer discharging certain obligation: He was his unseen Friend with whom he walked in life, by Whose fellowship he was changed, to Whom he prayed. The effort of life should be to do the Will of God, the strength of life was Peace, the reward of life was to be like Jesus. Perfect Christianity was to be as St. John was with Jesus. It was the Idyll of Religion.

Perhaps his two famous books, "Natural Law in the Spiritual World," and "The Ascent of Man," ought to be judged as larger Idylls. A writer often fails when he has counted himself strong, and succeeds in that which he has himself belittled. It was at one time Drummond's opinion that he had made a discovery in that fascinating debatable land between nature and religion, and that he was able to prove that the laws which govern the growth of a plant are the same in essence as those which regulate the culture of a soul. It appeared to some of us that the same laws could not and did not run through both provinces, but that on the frontier of the spiritual world other laws came into operation, and that "Natural Law" set forth with much grace and ingenuity a number of instructive analogies, and sometimes only suggestive illustrations. Had Drummond believed this was its furthest scope, he would never have published the

book, and it was an open secret that in later years he lost all interest in "Natural Law." My own idea is that he had abandoned its main contention and much of its teaching, and would have been quite willing to see it withdrawn from the public. While that book was an attempt to identify the laws of two worlds which, under one suzerain, are really each antonomous, the "Ascent of Man" was a most successful effort to prove that the spirit of Religion, which is altruism, pervades the processes of nature. It is the Poem of Evolution, and is from beginning to end a fascinating combination of scientific detail and spiritual imagination. Both books, but especially the Ascent, were severely criticised from opposite quarters, by theologians because the theology was not sound, by men of science because the science was loose, and Drummond had the misfortune of being a heretic in two provinces. But he had his reward in the gratitude of thousands neither dogmatic nor partisan, to whom he has given a new vision of the beauty of Life and the graciousness of Law.

His books will do good for years, as they have done in the past, and his tract on Charity will long be read, but the man was greater than all his writings. While he was competent in science, in religion he was a master, and if in this sphere he failed anywhere in his thinking it was in his treatment of sin. This was the defect of his qualities, for of him, more than of any man known to me, it could be affirmed he did not know sin. As Fra Angelico could paint the Holy Angels because he had seen them, but made poor work of the devils because to him they were strange creatures, so this man could make holiness so lovely that all men wished to be Christians; but his hand lost its cunning at the mention of sin, for he had never played the fool. From his youth up he had kept the commandments, and was such a man as the Master would have loved. One takes for granted that each man has his besetting sin, and we could name that of our friends, but Drummond was an exception to this rule. After a lifetime's intimacy I do not remember my friend's failing. Without pride, without envy, without selfishness, without vanity, moved only by goodwill and spiritual ambitions, responsive ever to the touch of God and every noble impulse, faithful, fearless, magnanimous, Henry Drummond was the most perfect Christian I have known or expect to see this side the grave.

JOHN WATSON.

SHOULD IMMIGRATION BE RESTRICTED?

BY SIMON GREENLEAF CROSWELL.

C DURING recent years there has been a growing interest in devising some plan for checking or limiting the tide of immigration whose waves sweep in upon the United States almost daily in constantly increasing volume. The subject has been discussed in legislatures, in political meetings, from pulpits, in reform clubs, and among individuals on every hand. The reason for the interest which the subject now excites is easily found in the recent enormous increase of immigration.

Much as the subject has been discussed, however, and many as have been the arguments which have been brought forward on one side or the other, there has been a noticeable lack of the one element which can give certainty to the arguments and force to the conclusions. Inferences, deductions, conjectures, and a host of less persuasive probabilities have been brought forward and paraded in each line of battle; but of facts, such facts, I mean, as bear directly and strongly upon the problems involved, there has been little use made. The purpose of this article is to set forth clearly and prominently these facts, to investigate them, and see to what conclusions they point.

The problem divides itself at the outset into two distinct questions: First, is it for the advantage of the United States that immigration be checked or limited? Second, if so, in what way should the check or limit be applied?

It will not do to trust to the answers to these questions given by local interests or party prejudices. If these interests and prejudices were to be consulted, we should hear in answer to the first question, a loud and emphatic "yes" from the Eastern seaboard, and from the great centers of population on the east slope of the Alleghanies. In these Eastern cities, where the already

crowded mechanic and artisan and laborer view in each new arrival a possible competitor and rival, local feeling would be strongly in favor of a limitation of the immigration. On the other hand, from the central States in the Mississippi Valley, where the existing population has not risen to so high a percentage, compared with the supporting powers of the land, and where the demand for unskilled labor which the immigrants are qualified to perform is still in excess of the supply, the answer would not be so distinct and emphatic. There would be good reasons advanced by one party why immigration should be encouraged, rather than checked, while another party would assert that there were already too many immigrants and that some limit must be fixed. Going still further West, where the average percentage of population to the area of the land dwindles in some localities almost to the vanishing point, we should hear from the isolated inhabitants who are wrestling with nature on their scattered farms and ranches, a cry for laborers, as distinct and emphatic, if not uttered by so great numbers, as the opposing cry in the East.

Furthermore, it is evident that the same questions cover two distinct fields of inquiry, the first political and the second industrial. Nor can the two fields be examined simultaneously, for the reasons, if there are any, from a political point of view, why immigration should be limited, would not apply to the question viewed on its industrial side, and *vice versa*.

Taking up first the industrial question, we may assume that the entrance of the swarms of immigrants into our country represents the introduction of just so much laboring power into the country, and we may also assume as a self-evident proposition that the introduction of laboring power into an undeveloped or partially developed country is advantageous until the point is reached at which all the laborers whom the country can support have been introduced. Adam Smith says that labor is the wealth of nations. If this is true, the laborer is the direct and only primary means of acquiring wealth. The facts of the history of our country bear out this view. Beginning with the clearing of the forests, the settlement of the villages, the cultivation of farms, proceeding to the establishment of the lumber industries, the cultivation of vast wheat and corn fields, the production of cotton, the working of the coal and oil fields of Pennsylvania, the development of the

mining districts of the West, culminating in the varied and extensive manufactures of the Eastern and Central States, the laborer has been the Midas whose touch has turned all things to gold.

There is, however, a limitation to the principle that the introduction of laborers into a partially developed country is advantageous. A point is finally reached which may be called the saturation point of the country ; that is, it has as many inhabitants as it can supply with reasonably good food and clothing. This saturation point may be reached many times in the history of a country, for the ratio between the food and clothing products and the population is constantly varying. New modes of cultivation, and the use of machinery, as well as natural causes affecting the fertility of land, which are as yet obscure, render a country at one time capable of supporting a much larger number of inhabitants than at another time. Still, there is a broad and general truth that, time and place and kind of people being considered, some countries are over-populated, and some are under-populated.

We are accustomed to say that some of the countries of Europe are over-populated, and there are among us some who are beginning to say that the United States have reached the same point. This is far from being the case, and a single glance at the comparative average density of population of the principal European nations and of the United States will be sufficient to drive this idea out of any fair minded person's head.

The most thickly settled country of modern Europe is the Netherlands, which had, in the year 1890, the very large average of 359 inhabitants per square mile of territory. Great Britain came next with the almost equally large average of 311 inhabitants per square mile of territory. Germany had 234 and France 187. Taking in for purposes of comparison, though not of much force in the argument, China, we find there an average population of 295 inhabitants per square mile of territory. It is a question of some difficulty to decide in any specific case whether a country has reached the point of over-population. We may admit that Great Britain, with its average of 311 inhabitants per mile, is over-populated, though the conditions of life do not seem to be wholly intolerable, even to the lowest classes there. If Great Britain is over-populated, *a fortiori* are the Netherlands,

and we may even go so far as to admit that Germany, with its average of 234 inhabitants per square mile, is over-populated. But when we come to France, with its 187 inhabitants per square mile, we may pause and see what are the conditions of the French people. So far as it is possible to judge of a people in the lump, it would seem that the population of France is not excessive for the area. The land holdings are divided up into very small lots, but are held by a great number of people. Mackenzie, in his history of the nineteenth century, says that nearly two-thirds of the French householders are landowners, while only one British householder in every four is an owner of land. This condition results partly from the difference in the system of inheritance of land in the two countries, but would be impossible if the country were over-populated. Moreover, there are five millions of people in France whose possessions in land are under six acres each.

Taking, then, the population of France, averaging 187 per square mile, as being at least not above the normal rate of population, what do we find in comparing it with the population of the United States? We find over here vast tracts of country, amounting to nearly one-third by actual measurement, of the whole area of the United States, and including all the States west of the Missouri and Mississippi valleys (except a portion of California), having a population of less than six individuals per square mile. It would seem as if the mere statement of this fact were alone sufficient to disprove any proposition which asserts that the saturation point of population has been reached in the United States. While that immense expanse of country averages only 6 individuals to the square mile, there can be no reason for saying that this country is over-populated. Coming now to the more thickly settled portions of the United States, we find a large area spread out over various parts of the States having a population of between seven and forty-five individuals per square mile. In a very few States, New York, Pennsylvania, Michigan, Ohio, and Indiana, the population of the whole State averages over forty-five and under ninety individuals per square mile, and the same average holds in parts of Massachusetts, Connecticut, Illinois, Kentucky, and isolated spots in the South. In a small territory, made up of parts of Massachusetts, Pennsylvania, and New Jersey, the population averages over ninety per square mile.

The contrast between these averages of population in various portions of the United States, the highest of which is about ninety individuals per mile (and that over very small portions of the area of the United States) and the average densities of the European countries, previously examined, shows how very far the United States still is from complete population. This appears still more clearly when the average population of the United States, taken as a whole, is considered, which is the extraordinarily low figure of twenty individuals per square mile of territory. What a striking contrast ! Can the most ardent advocate of the Malthusian doctrine claim that the United States already has too many inhabitants, or is in danger of having too many in the immediate future ? Do we not rather need to encourage immigration, to fling wide open the gates of our country and secure as large an addition to our working force as possible ?

There is, however, a limit to immigration which should be invariably applied. The reason why the encouragement of immigration is desirable from an industrial point of view is simply that it furnishes more laborers. Necessarily, therefore, those who are unable or unwilling to work should be excluded.

When we come to the political aspect of the problem, however, a wholly different series of considerations present themselves. The question now is not how many citizens, but what sort of citizens. The theory of our government is not limited to any number of people. It provides for expansion in the number of representatives in Congress in proportion to the increase in population, and increases the number of Senators as new States are formed and added to the Union. Similarly each State government has elastic provisions which enable it to cover a population of 400,000 as well as a population of 40,000. But the one critical test in determining whether or not our immigration should be limited for political reasons is the character of the people whom we are admitting to the privilege of citizenship in the United States.

In order to investigate successfully the political effect of the immigration, it is necessary, at the outset, to divide it into its constituent nationalities, so that taking up each nationality in turn, we may see what fitness it has from its previous political training in its native country for undertaking the duties of American citizenship. The disintegration of the tide of immi-

gration into these constituent parts affords some interesting information which will be seen to have a bearing, in several directions, on the questions under consideration in this article. Taking the statistics of the year 1891 as a typical year of recent immigration, the tide of immigration amounted in round numbers to 500,000 individuals.

The largest feeder of this enormous stream came from Germany, which sent, roughly speaking, 100,000. But a noticeable point about this nationality is the great decrease in the number of immigrants it has sent us in the last fifteen years. In the year 1882 the total German immigration into the United States amounted to no less than 250,000, but in 1883 and 1884 there was a great decrease, and since then the average has remained in the neighborhood of 100,000. We shall see later that on the other hand, the immigration from the Latin and Slav nations of Europe, particularly Italy, Poland, and Austria, shows an enormous rate of increase in the same period, although, of course, the absolute amounts are much less than those of the German immigration.

The next largest feeder to our stream of immigration in the year 1891, the typical year of our examination, was Italy, which contributed 76,000 immigrants to our population. It is noteworthy to remark, in this connection, that Italy has more than doubled her annual rate of contributions to our people in the ten years under consideration, the immigration from her shores in 1882 being only 32,000.

The next largest contributor is Austria, which in 1891 furnished 71,000 new members of our community. Austria, too, has doubled her rate of contribution, sending us in 1882 only 32,000. Next come, side by side, in their offerings to our population, England and Ireland, each of which countries sends us about 50,000 new inhabitants every year, and has continued to do so for the last 15 years. Russia, exclusive of Poland, sent 47,000 in 1891, this being three times the number which she sent in 1882, a large increase. Sweden came next with 36,000 immigrants and that country shows a woeful falling-off of nearly one half in the ten years under consideration, for in the year 1882 it sent 64,000. Poland in 1891 sent us 27,000 immigrants, showing an enormous increase of nearly seven-fold over its contribution of 4,000 in 1882. Scotland and Norway and Denmark all send

about the same number, that is, about 12,000 each ; Norway showing a diminution in the decade ending 1891, from 29,000 in 1882, but the other two remaining about stationary. Switzerland in 1891 sent 6,000, a diminution from 10,000 in 1882. The Netherlands sent 5,000 in 1891, a decrease from 9,000 in 1882. France sent 6,000 and Belgium 3,000, these figures being about the same during all the years covered by our investigation. I have left out of the account the only other important factor in our immigration in the ten years considered, namely China, because the door was shut in its face with considerable emphasis in 1883, and the immigration from China to the Western States, which in 1882 amounted to 40,000, fell in 1883 to 8,000, and in 1884 to 279 individuals, and may, therefore, be neglected at the present time.

Now, an examination of the political institutions in the countries from which these immigrants come would show that in almost no case, that of Russia and Poland alone excepted, are the elements of representative government wholly unknown to the common people. In most of these countries, some form of popular government has, either wholly or partially, gained a footing, with the inevitable result of accustoming people more or less to representative institutions. Yet the short time that this has been the case in many of the countries which pour half or over of the total flood of immigration into the United States, and the long centuries of despotism which preceded this partial and recent enlightenment, make it painfully evident that there can be, in the large part of our immigrants, little knowledge of the republican form of government, and little inherited aptitude for such government. It would at first seem as if the results of such immigration must be disastrous to our country.

And yet the situation is not so hopeless. There is nothing mysterious, or even very complicated, about republican institutions. A little time, a little study, a little experience with the practical workings of elections, is sufficient to convey to any person of ordinary intelligence as much familiarity with these matters as is necessary for the intelligent appreciation of their objects and purposes. Nor is the material out of which the prospective citizen is to be made wholly unfitted for its purpose. To be sure, the Latin races, the Slavs, Hungarians, Poles, and others, have no inherited aptitude, nor, if we may judge from the his-

tory of the races, any inherent capacity for self-government and free institutions, but, as I have before said, in almost every case they have had in their own country a partial training in the forms of representative government. All that is needed is to amalgamate this heterogeneous mass, to fuse its elements in the heat and glow of our national life, until, formed in the mould of everyday experience, each one shall possess the characteristic features of what we believe to be the highest type of human development which the world has seen, the American citizen.

The process of acquiring American citizenship is regulated by acts of Congress. It is a simple process. Practically all that is required is a continuous residence of five years in the States, and one year in the special State in which citizenship is applied for, and the declaration of intention to become a citizen may be made immediately upon landing. This last point will be seen later to be very important.

Citizenship in the United States, however, under the act of Congress, does not carry with it the right to vote. This right is entirely a matter of State regulation, and the Constitution or statutes of each State settle who shall have the right to vote in its elections. The underlying idea of the whole system is universal male suffrage, and the franchise is granted (after a certain residence which will be discussed later), with only certain general limitations of obvious utility, such as that the voter must be twenty-one years of age, that he must not be an idiot or insane, and generally, that he must not have been convicted of any felony or infamous crime, although in many States a pardon, or the serving of a sentence, will restore a felon to his civil rights. In a few of the States paupers are also excluded from voting. With the question of woman suffrage we have nothing to do, as its settlement, one way or the other, does not affect the subject we are discussing.

The important qualification, however, in relation to the subjects which we are discussing, is that which requires residence in the State previous to the exercise of the franchise. And on this point the States may be divided into two great classes. One class allows no one to vote who is not, under the laws of Congress, a citizen of the United States, either native or naturalized. As we have seen that five years' residence is a requisite to United States citizenship, these States, therefore, require five years' resi-

dence as a prerequisite to acquiring the right to vote. These states are California, Connecticut, Georgia, Illinois, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Montana, Nevada, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, and Washington. This requirement is admirably calculated to secure that preliminary training in the practical working of our institutions which must be necessary to most of the immigrants before they can intelligently exercise the rights which are conferred upon them by American citizenship, and we cannot but admire the sagacity and judiciousness of those who framed our naturalization laws in selecting this period of time for the pupillage of the intending citizen. The period is long enough even for one who is engrossed in the cares of earning a support for himself and his family, amid all the excitement and novelty of a changed residence, to acquire in the five succeeding annual elections a sufficient knowledge of republican government for all practical purposes. To delay him longer in the exercise of his political rights would be an injustice ; to admit him to them sooner would be an imprudence.

There is, however, a class of States which, departing from the wisdom of the federal statutes, have marked out for themselves another line of conduct which cannot be too deeply deplored. Many of the States, whose names will be given hereafter, have considered that the declaration of the intention to become a citizen, which is a preliminary, as we have seen, to naturalization, is in itself, or combined with a very short term of residence in the State, sufficient to entitle the person to the exercise of the franchise. In Alabama, Arkansas, Delaware, Florida, Indiana, Minnesota, Missouri, North Carolina, North Dakota, Texas, and Wisconsin, one year's residence in the State, combined with the declaration required by the United States laws of the intent to become a citizen, is the time limit to qualify a voter. In Colorado, Kansas, Nebraska, and Oregon, only six months' residence in the State is required. Either of these periods is much too short for the educational purposes necessary to fit the applicant for the duties of citizenship. Amid the excitement and turmoil necessarily attending a change of residence and country, immersed as he would be in starting his business, or in getting his farm under cultivation, it would be impossible for him to give

any proper attention to political matters in one year, and still less would this be possible in six months. To allow the right to vote on the expiration of so short a residence, is to invite into the polling booth a class of voters whose presence cannot fail to strengthen the hands of political bosses, to render intelligent administration of the government more difficult, and to open a wide field for corruption.

There are in a few states other qualifications required of a voter. The most important of these is the educational qualification, which exists only in Connecticut and Massachusetts. In neither of these is it very severe. In Connecticut the voter must be able to read any article in the State constitution, and any section of the statutes. In Massachusetts he must be able to read the Constitution and to write his name. Too much praise can hardly be given to these requirements. The whole edifice of our national life is founded upon education, and to this potent factor must we look for many of the improvements necessary to the proper development of our national life.

In quite a number of States a pecuniary qualification exists in the shape of the payment of some tax, generally a poll tax, within two years previous to the date of the election. This requirement does not seem to be so germane to the spirit of our institutions as the other. The great present danger of our country is the danger of becoming a plutocracy, and while there is no doubt that a widespread interest in property develops stability of institutions, yet there is also great danger of capital obtaining so firm and strong a hold upon political institutions as to crush out the life of free government and to convert the national government into a species of close corporation, in which the relative wealth of the parties alone controls. This qualification is found in Delaware, Florida, Georgia, Mississippi, Nevada, Pennsylvania, Tennessee, and Texas.

We have now examined with some thoroughness the component parts of the tide of immigration as it arrives at our shores; we have seen what nationalities go to make up the grand total, and what previous training they have had in the political institutions of their native countries to fit them for American citizenship, and what additional requirements are imposed upon them by our statutes before they can participate in voting and government in this country. What are the conclusions to which the

view of these facts brings us ? They seem to me to be these : first, that the growth of immigration is a desirable thing for this country ; second, that the immigrants who arrive at our shores are for the most part good material out of which to make American citizens, if they are properly trained ; third, that the two conspicuous defects in these immigrants are lack of general education and lack of special training in free political institutions. Applying these conclusions to the questions which were stated at the outset of this article ; first, is it for the advantage of the United States that immigration should be checked or limited ? second, if so, in what way should the check or limit be applied ? the answer would be that no check or limit should be applied to the immigration of *bona fide* laborers, but that a check should be placed upon the exercise of the franchise by immigrants in all States by requiring a residence of five years in this country before they can vote, and by also requiring some moderate educational test.

With these safeguards established we might look without any serious apprehension upon the increase of our population. The founders of our state moulded the outlines of its form in large and noble lines. The skeleton has grown and clothed itself with flesh with almost incredible rapidity in the hundred years of its existence. But it is still young. We should avoid any measures which would stunt or deform its growth and should allow it to develop freely and generously till the full-grown American nation stands forth pre-eminent among the nations of the earth, in size, as well as in character and organization, and man's last experiment in government is clearly seen to be an unequivocal success.

SIMON GREENLEAF CROSWELL.

RECENT ACHIEVEMENTS IN MOUNTAINEERING.

BY SIR WILLIAM MARTIN CONWAY, F. R. G. S.

It is not now, nor will it ever again be, possible for many new expeditions of importance to be instituted and carried out in one year in the Alps. Twenty years ago, as the pages of the *Alpine Journal* attest, virgin peaks were being conquered by dozens, new passes crossed, and new routes up peaks already ascended effected in numbers that are the envy and despair of the climber of to-day. All the peaks of the Alps that amount to anything have now been climbed.

Most of them have been climbed by many routes, and it was only with difficulty and after much research that, in the year 1894, when I traversed the "Alps from end to end" with two Indian Gurkha sepoy, I was able to discover a little snowy mountain not far from the Tödi, no ascent of which was recorded, and which we were able to climb, as it were, for the first time, and name Piz Gurkha. I say "as it were for the first time," because veracity compels me to admit that a few hundred feet below the summit we found a piece of broken bottle, and that on the actual top the stones did not look as though they had ever been disturbed by human visitors.

Still, there are a few gleanings to be had in the Alps even now, and they are being rapidly gathered in. In the summer of 1895, for instance, the finest Alpine summer in the memory of the oldest inhabitant, two new and very difficult routes were traversed for the first time.

One of them led right up the narrow, battlemented, south ridge of the great Weisshorn, the peak which the late Professor Tyndall was so proud to have been the first to scale. Many a good climber had looked at that ridge and been content to leave it for some one else. The top bit of it was scaled some years

ago by a party which climbed up the face of the mountain to it, but no one ever went along the whole ridge till Mr. Broome did so, in August, 1895.

Most visitors to Switzerland have seen the Weisshorn; comparatively few know the Herbetet, for that is a smaller and, indeed, a minor peak amongst the beautiful mountains of Cogne, where the King of Italy has his shooting preserves and where a famous herd of bouquetin, the last in the Alps, is thus kept from extinction.

The Herbetet stands between the better-known Grivola and Grand Paradis. Mountaineers know it as the best peak for a scramble among the Graian Alps of Cogne. I was once on its summit with the lamented Mr. Mummery, the finest climber that ever lived.

It was on a glorious day and the views were superb. We sat on the top and talked of the Himalayas, which both of us afterwards visited, and where he lost his life. When the time came to descend he proposed that we should try and force our way down the south ridge, an extremely narrow rock *arête* in which were set a series of lofty and quite precipitous pinnacles. That *arête* was climbed for the first time last summer by an adventurous party, and quite recently I had the pleasure of listening, at the Alpine Club, to Mr. Oliver's account of how success was won.

I have spoken of Mr. Mummery, and to him I must now return, for he was the hero, or rather the victim of last year. He left England in the spring with two friends, Dr. Collie and Mr. Hastings, to adventure ascents among the greatest of the wondrous Himalayas. Their goal was the giant mountain, or rather group of mountains, called Nanga Parbat, which stand on the west frontier of the kingdom of Kashmir, and about which those who care to enquire can find more in my book on "Climbing in the Himalayas."

There is one remarkable peculiarity of the series of Himalayan ranges between the Vale of Kashmir and the Central Asian watershed—they are one after another cut right across by ridges. The reason for this is that the rivers were there before the ranges were formed, and as, by the crinkling of the earth's crust, the ranges were raised, the rivers cut gorges through them and maintained their flow.

Nanga Parbat is part of the true and principal Himalayan range and its summit rises to the stupendous altitude above sea-level of 26,630 feet. Close to its foot; not more than ten miles in horizontal distance from the peak, the Indus flows through a desert gorge, and here the height above sea-level of the river-bed is not much above 3,000 feet.

It is easy to conceive from these figures on how vast a scale nature's architecture is here set up. I have never been down this part of the Indus gorge, but a friend of mine, who was there, told me that the path along the side of the gorge is in places perilously narrow and carried across precipices of such appalling character that at one point a servant of his, who lost his footing, fell a mile in vertical height, and was, of course, smashed to atoms.

One side of Nanga Parbat sinks to this gorge by a series of ridges and ravines—that is the Chilas side. The other two sides of the mountain, for it is on a triangular base, are likewise defined by long valleys, one of which is filled by the great Tarshing glacier.

It was to this valley of the Tarshing glacier that Mummery and his companions bent their steps in June, 1895. They were joined there by my old travelling companion, Bruce, and two Gurkha sepoy of his regiment—not, I am glad to say, any of the boys who accompanied me either in India or the Alps. Towards the Tarshing glacier Nanga Parbat presents a mighty ice-draped wall, 15,000 feet in height and likely to be never ascended by man. Mummery passed along under this, and then round the end of the mountain, crossing by a snowy pass to one of the ravines running down to the Indus. From this they attempted to climb the mountain, but lack of provisions drove them back to the Tarshing valley.

They returned again and renewed the attempt, establishing camps and stores of provisions at successively increasing altitudes. At last they climbed one day to a height of some twenty thousand feet or more, but there illness overtook first one and then another, till they were all forced to descend.

But Mummery was not the man to yield. He determined to try the peak again from the next ravine further round. He said that he and the two Gurkhas would climb over the intervening ridge by a pass at a height, I believe, of some twenty thousand

feet, whilst the other members of the party took the baggage round by way of the Indus gorge and came up to meet him.

Taking a few days' provisions with him he bade farewell to the others and started. He and the two Gurkhas that went with him have never been seen again.

Their way led them at first across a steep mountain-side, down which avalanches of ice and rock appear often to fall. Doubtless it was here that ruin overtook them. They were probably overwhelmed by an avalanche and now lie buried in the depths of the river of ice below, which will slowly carry their bodies down, and years hence will discharge them into the Indus.

Thus ended the career of a man who was not merely remarkable as the most skillful mountaineer of his day, or of any previous day, but a man who was of remarkable character and great intellectual gifts. The mountains have claimed another victim, and they have chosen the first among the very *élite* of the craft.

There is a tradition among the natives of Chilas that a Crystal Castle stands on the topmost point of Nanga Parbat—it is a fairy castle, for all the places of eternal snow are fairies' land. They say that once in days long ago a huntsman climbed up to it and looked in, and lo! it was filled with a countless multitude of snakes. It will be a long time, I think, before anyone actually makes the ascent of Nanga Parbat and brings down a fragment of the Crystal Castle.

After Mummery's disappearance his friends spent the remainder of the season looking for traces of him and finding none. They tracked laboriously up various ravines, but autumnal snowfalls soon set in and ended the possibility of further researches. One by one they returned to England and left all that was mortal of the great mountaineer alone in the fairies' land.

As the Alps have been exhausted from an exploring point of view, and the climbing craft has been simultaneously developed and popularized, travellers have begun to pay increasing attention to the other snowy mountain ranges of the world.

The Caucasus has already received no inconsiderable amount of attention and most of its principal peaks have been climbed for the first time by members of the Alpine Club. The highest point of Ushba, the Caucasian Matterhorn, whose wonderful

form is already popularized by numerous widely-sold photographs, has never yet been reached.

Two parties went out from England last year to have a look at it but came home again without doing more. There was a third party of a more æsthetic character consisting of men who climbed indeed, and could climb well, but who had in view the enjoyment of beauty rather than mere gymnastic achievement. Amongst them was my old Himalayan companion, that admirable artist, A. D. McCornick.

But the Caucasus is now an old story. Remoter ranges are being sought with growing persistence. Observe that the world in all its main level areas is now explored. Africa begins to be a twice-told tale. Only the polar regions and the great mountain ranges are still for the most part unmapped, unpenetrated, and unknown.

To the explorer of the twentieth century will belong the world of ice, for the nineteenth century has finished the tropics and the deserts.

In the Southern hemisphere, where snowy ranges are few until you go very far south, the Alps of New Zealand form a very attractive group. The highest of them, Mount Cook, can be seen from the town of Christchurch, yet a very few years ago practically nothing was known about the range or its glaciers.

In the Southern summer of 1881-82 an Irishman, the Rev. W. S. Green, made these mountains the goal of an expedition. He climbed several of them and nearly reached the top of Mount Cook. The imagination of the New Zealanders was kindled by Mr. Green, and the young men of Christchurch and Auckland thereupon formed a New Zealand Alpine Club for themselves, and started scrambling in a bold and independent fashion.

The record of their doings is pleasant reading. They had no experienced guides to teach them; they had to teach themselves the climbers' craft with the help of books and hard-won experience. All these pioneers were young men of business, and their holidays were few. As surely as they reached within striking distance of some longed-for peak and a fine day dawned, so surely was their leave up, and they had to hurry back to their offices.

Nevertheless, as the years went by, they pushed forward the exploration of their Alps steadily and effectually. They aroused

the interest of their Government, with the result that one or two of them were appointed mountain surveyors, and a very admirable map of the glacial region has resulted from their labors.

Last year a second English expedition made the New Zealand Alps its goal. Its leader was my companion in the "Alps from End to End," Mr. E. A. Fitzgerald, and he was accompanied by the wonderful Swiss guide, Mat. Zurbriggen, whom I took to the Himalayas in 1892.

Rumor had preceded them, and the young men of New Zealand determined that the actual summit of Mount Cook should not remain untrodden for them. Accordingly, on Christmas Day, they organized a party and reached the point of the peak before Fitzgerald and Zurbriggen landed.

As Mount Cook was climbed, Mr. Fitzgerald turned his attention to other mountains and performed mighty feats, as will presently appear. When his season's work was done he heard that it was being said that they had not climbed Mount Cook, because it was too hard for them, so Zurbriggen one day walked up it, quite alone, by a new route.

It would not interest the general reader to be told a mere list of the names of the new peaks which Fitzgerald conquered. They were many and, as climbs, they were, without exception, of extreme difficulty and very dangerous; for, it must be admitted, the New Zealand Alps are amongst the most dangerous mountains to climb on the face of the earth.

To begin with, they are built of the most rotten rock conceivable. There is neither firm handhold nor foothold for yards together. The mountains crumble at a touch.

On one occasion a huge rock gave way beneath Fitzgerald's feet, and he was cast over a precipice of appalling depth, where he hung at the end of a rope, Zurbriggen only just succeeding in holding him up. To make matters worse, two of the three strands of the rope were cut through on the edge of the rock by the jerk of the fall. This was only one of a series of narrow escapes experienced by these adventurous climbers.

Other great dangers in the New Zealand mountains are caused by the extraordinary rainfall in that country. On the western slopes of the mountains the measured annual rainfall amounts to 140 inches. The weather changes with extraordinary rapidity and there are seldom two fine days in succession.

The result is that the mountains are overburdened with snow, and that the snow line descends much lower than in any corresponding latitude. Glacial phenomena are on a very large scale. The crevasses are big; avalanches are big; the movement of the glaciers is rapid. Everything is more unstable on the New Zealand ranges than in other countries.

Time after time Fitzgerald and Zurbriggen slept out on the hillside, only to be driven down next day by the first of a long series of almost continuous storms. They slept out on seven different occasions before they were able to ascend one important peak. When they gained its summit they received their reward, for from it they were able to overlook an unexplored portion of the range, and there they discovered the pass, since named Fitzgerald's Pass by the New Zealand Government, and about which a word must be said.

The agricultural portion of the South Island is divided from the bush-covered and gold-bearing western side, or Westland, by the snowy Alps. Westland is one of the most beautiful regions in the world, comparable for fiord scenery to Alaska, or Norway. Till now, however, a great part of it has been very difficult of access, for there was no known pass across the snowy range in a hundred miles and more of length.

The New Zealand Government greatly desired to find a pass over this barrier, and to that end sent out more than one exploring party without success. From the summit of the peak, with so much difficulty attained, Fitzgerald looked down upon the very pass that was wanted. Access to it appeared easy from both sides. On one side there was no snow, on the other but little.

A few days later the climbers set forth to traverse the pass they had seen and descend to the west coast. They had on this, as on other occasions, to carry all they required on their own backs. When the needful photographic and other instruments, the rope, and so forth, had been accommodated, there was only room for one day's provisions.

The actual crossing of the pass was accomplished in a few hours; then came the descent down the Copeland River valley to the habitations of men by the seaboard. Every yard of the way had to be fought for when once the scrub level was reached.

For two days and a half, without food or shelter, in down-

pours of rain such as only Westland knows, the explorers struggled along. At last, when almost at the limit of their forces, they tottered into a frontiersman's camp and completed their task.

The news of this success was welcomed in Christchurch, and the government immediately caused works to be undertaken to make a mule track over the pass. Presently there will be a carriage road, for once the scrub has been cut down, there are no engineering difficulties of moment to be overcome. Thus, in the new regions of the world, the climber may open highways, along which in years to come large populations and commercial tides may flow.

Here ends my chronicle of recent mountaineering achievement. It takes no account of what has been done on the American Continent, by my fellow-members of the Appalachian Mountain Club, by American and Canadian surveyors, and others, because, alas ! I have not been able to follow their doings.

As a continent of mountains America ranks only second to Asia, and far surpasses Europe. Along its great backbone much has already been done, but from a mountaineer's point of view much more remains to be done. The rising generation of adventurous youth have their work before them ; let us hope they will do it in the spirit of Clarence King, and record their doings in as charming and memorable a form.

WILLIAM MARTIN CONWAY.

THE EVOLUTION OF THE NAVAL OFFICER.

BY ADMIRAL P. H. COLOMB, R. N.

ABOUT five and forty years ago Admiral Sir Charles Napier published a book on the state of the navy, in which, through some pages, he deplored the decadence of the junior naval officers of his day. In 1847 the greatest admiral of his time, the nephew of Earl St. Vincent, and known as "the last of Nelson's captains," Sir William Parker, thus wrote: "I feel more than ever the necessity of judicious, steady and firm officers being kept afloat, who will, on the one hand, check the absurdities and presumption of modern innovations which are undermining the discipline of the service, and, on the other hand, avoid the severity and harshness which characterized the organization of some ships in former days. The midshipmen, mates, and junior lieutenants all require a strict but courteous control, and if a stand is not made determinedly against their flippant and conceited demeanor, we may witness a navy as brave, but in its efficiency lamentably degenerated from the days of Nelson and our successful leaders during the revolutionary war."

These two great officers only followed the fashion of their time in so regarding their juniors. Most officers of forty to fifty years' standing can easily recall how universal this sort of feeling was amongst the senior ranks, and how long it continued. But now there is not probably to be found one single officer of the higher ranks who could think, much less write, so of the rising generation. The feeling of the seniors towards the juniors is unquestionably one of respect. There is a tendency clearly marked to draw comparisons between what we remember of the officers who were our fellows in the gun-rooms and ward-rooms of the sailing ships, or of the steam and sailing ships, of our past, and what is now seen in those mess-rooms of the steaming present, to

the disparagement of the former. During the last half century we have witnessed a complete revolution in the regards which the leaders of the navy throw down upon their followers.

It is often a subject of reflection and inquiry with me, how this evolution has come about. Why is it that the inner or fundamental elements of discipline stand on such a different footing now to what they did then? How much of the change is subjective in the minds of senior officers; and how much objective, or real, in the conduct and character of the juniors? I think it is possible to trace the causes, as of material surroundings acting on moral character and moral character inter-acting amongst the different ranks. The subjective thought of the seniors has not been without its effect on the character of the juniors. The conduct of the juniors has confirmed the thought of the seniors.

In any case a naval man of to-day whose experience stretches back to the navy of fifty years ago can evolve from his inner consciousness a series of mental surprises if he recalls situation after situation of his distant, but not dim past, and imagines the possibilities of re-establishing any of them to-day. The theory of discipline amongst those who were building it up and maintaining it then, was that the more the junior officer's self-esteem was destroyed, the better man he was likely to become. The "smart" officer was often, if not generally, noted for his skill in the use of contemptuous adjuration as applied to "the young gentlemen" of his midshipmen's berth. Epithets such as "qualified young ass," "qualified young fool," "qualified useless trash," flew about in those days backwards and forwards over the decks of the ship as the ball flies over the net on the tennis ground, if we assume that it is all serving, and no ball is taken. The youngster speedily learnt the practice and the language, and "passed it on" like Sheridan's Trip, so that the supply of practitioners never failed.

Of course the habit developed a great number of men who were mere verbal bullies, men who never considered for a moment the effects of what they were doing or saying, and out of whose mouths the appropriate language flowed like steam out of the spout of a boiling tea-kettle. But whether the theory was built up to fit the practice, or whether the practice grew out of the theory, it is certain, that it was cultivated as useful to the partly feathered naval fowl. I remember in my youngsters days,

having sometimes a difficulty in establishing congruity between the language of some of my seniors toward me when "on duty"; the distinct regard that I felt for them; and the certainty I had of their real regard for me. It was a revelation and a shock to my whole system, when, after years of shaken self-confidence, generated by the belief that the language as applied to me was true, the key to the enigma was supplied.

I loved my captain of those days with a love which was only imperfect in its failure to cast out fear. I had been subject to the steam of the tea kettle for perhaps two hours—at any rate until I was limp from its effects, and a subsequent summons to closer interview with my commander did not tend to put much stiffening into me. But what my dear commander wanted was to render me a formal apology as being a transgressor of orthodox limits in the language of contempt. I was not to take too great note of the official practice, designed in the first instance to make me "smart," and exceeded in the heat of debate, as it were.

Naturally, officers whose habitual official language expressed contempt for the character, intellect, and powers of their juniors could scarcely hope to have much respect for them in their hearts. But we must clearly understand that there was in those days a condition of knowledge in the senior officer which, if it did not justify the extravagance of his language, did justify a sense of personal as well as of official superiority. For the sailing navy, just when the advent of steam was about to upset it, was wholly based upon experience and authority. Seamanship, the profession of which was almost the be-all and end-all of the naval officer's pride, was an affair of precedent. There are men perhaps yet amongst us who went to sea in ships that were in nearly every detail those that bore Hawke and his captains to the victory of Quiberon Bay. Men studied the seamanship of the author of the *Shipwreck* in a new edition of the *Marine Dictionary*, commended by Collingwood. D'Arcy Lever copied him, and the friend of our naval youth, the disappointed, but not broken Lieutenant Martelli, copied him again in the accurate language of the Boatswain of that day. Falconer had told the navy of his time that :

"He who strives the tempest to disarm
Will never first embrace the lee yard arm."

And whether his seamanship was wrong or right (in the revolutionary epoch heralded by steam, I used to employ the condemned method alternately with the other) was a matter of serious debate even fifty years ago.

But in this state of subservience to authority, when "I have seen it done" clinched every argument and concluded every debate; when we were aghast at the proposal to abandon "reef-points" in our topsails, and to adopt the French system of "reef-lines," and "toggles and beackets," he who had been longer at sea was almost certain to have more knowledge of sea work than the later comer. The older officer was personally, as well as officially, the superior of the younger. Unless the captain was one of the favorites of fortune he was the oldest man in the ship, had been longer at sea, and was more versed in the precedents than any one else. It might be true that the doctor knew more about medicine and surgery than the captain did, but then that was none of the captain's business. Neither was the "soldiering" of the marine officer—that was a thing to be despised. So there was no one who could possibly know more of the captain's business than the captain himself. The first lieutenant might stand next in knowledge, but he only had less knowledge of the same kind of which the captain had more. The captain might direct him, but could not consult him without some sacrifice of dignity and some breach of theory.

The same conditions worked down through all ranks. The dependence of each officer was in the man above him. The man below him did not share the duty with him: he did what he was told by the man who knew better.

The general result was inevitable. From the very first the officer who had a superior in the ship came to consider he was working for that superior, and depended for his success upon the way the superior regarded his service. Personal service predominated generally. The sense of combining for a common end was greatly or wholly lost. The personal character of the captain, or perhaps of the second in command as his mouth piece, determined the character of the ship for discipline and moral efficiency, and it was scarcely possible for her junior officers to consider themselves in any way affected by, or responsible for, a state of things due to the initiation of the higher authority.

Here was the action and reaction. The work of the ship fell

on the shoulders of the second in command. All waited for his orders, were not interested in them when received, and probably obeyed them to as small an extent as was consistent with keeping out of "trouble." There were no departments in the ship. If the second in command was not everywhere at the same moment, if he did not superintend everything, everything fell to pieces. The officers junior to the second in command were really more or less of a trouble to him; they rather considered he was more or less of a trouble to them. They became hardened to the use of contemptuous terms, the younger officers to being exhibited in ridiculous and degrading public positions as a punishment for failures. They accepted the condolences of the seamen, who, nominally under their command, were sharers in their ignominy. The lieutenant, as officer of the watch, and the captain's representative in his absence, grew accustomed in his presence, when "carrying on the duty," to have his orders to the men of his watch suspended midway by the free criticisms of the more experienced captain, and the men not seldom waited a pause to make sure, before obeying the lieutenant, that the captain would not disallow the order.

The whole system which, it must be admitted, sometimes worked splendidly in the hands of exceptionally able men, was insidiously undermined by the arrival of the engineer on the scene. There is no doubt that, long after its introduction, steam propulsion was despised and hated by the ablest and best amongst our naval officers. Men went so far as to pride themselves on profound ignorance of everything relating to the steam engine. Years elapsed before the study of it became a road to promotion. Less than fifty years ago a rising young officer, who deliberately quitted a smart sailing frigate for service in a paddle-wheel steamer, did a thing which almost shocked his contemporaries. "Steamer's Lieutenant" and "Steamer's Midshipman," were well-known terms of opprobrium, for the majority governed public opinion.

But when the engineer came on board he possessed a knowledge with regard to the ship which it was at first no disgrace to the captain—rather to his honor, indeed—not to share. For the first time, the younger man, with the lesser experience of sea-life, was the superior in a knowledge which was necessary to the ship. The captain was the official, but no longer the personal superior of the engineer in his peculiar department. But the engineer

was not like the doctor, professor of a science of which the captain was not intended to know anything. The steamer's captain soon discovered that though he might not be an expert he could not place himself wholly in the hands of his engineer. For the first time the conduct of the ship became the consequence of a consultation between the captain, with a general but incomplete knowledge, and the engineer, with a special and complete knowledge. The ship was worked in departments.

Invention was stirred in many ways by the advent of steam, notably in the matter of guns and gunnery. The paddle-wheel usurped the broadside position for generations allotted to the gun. The artillery, being crowded thus to bow and stern, it became necessary to increase the power of the individual gun to make up for its loss in numbers. The heavier gun demanded altered mountings. The Elizabethan "truck gun-carriage" no longer sufficed. Improved shooting was obtained by locks, disparts, and tangent-sights. The shell, and the improved shell to burst by concussion on striking, added immensely to the force of the gun, but invaded its simplicity. The gunnery literature necessary to be supplied to the navy could no longer be contained in the half-dozen pages to which it had for generations been confined. The school of naval gunnery—the Excellent at Portsmouth—arose and grew, and the "Gunnery Lieutenant," even the "Gunnery Mate," invaded the warship as the exponent of the views and knowledge of the school.

Here it was again. Here was the younger officer, with the less experience, coming as it were between the captain and his ship with an expert and special knowledge of a very important part of her, of which he, the captain, could only have a general knowledge.

It was not possible to despise the knowledge of the gunnery lieutenant as it had been to despise that of the engineer. It was only possible to disparage it, and the owner of it. The majority, unconscious of how it was being driven, yet instinctively revolting, smiled contemptuously at Sir Thomas Hardy's fancies, and the pretensions of his successors in command of the Excellent and their scholars. Those men from the Excellent, it was held to be shown, had not the knowledge they claimed. They might be able to throw dust in the eyes of their superiors at sea; but they were empty vessels as far as real gunnery service went. It was

years, of course, before the Excellent scholars rose to the higher commands in any numbers competent to influence the current of thought. But whether or not, here was a new feature. Gun-nery lieutenants and mates owed an allegiance to the Excellent which crossed their allegiance to their captains. They became and were admitted to be centres of action as the engineers were, not wholly subordinate to the captain's influence. The advent of the torpedo and the use of compressed air, with the further addition of electricity, created yet another department afloat of the same general character as that born of the complexities of gunnery, and introduced yet another officer, perceiving a divided duty.

The great difference between the older special departments on board a man-of-war, namely those of the surgeon, the marine officer, and, perhaps, the purser, and the new ones, those of the engineer, the gunner, and the torpedo officer, was, that of the former the captain was officially held to know nothing; and of the latter he might be supposed to know a great deal. The change could only develop him in one way. His will was bounded by want of knowledge, and he had to consult his subordinates before he exercised it. The fact altered his tone in a hundred ways; and the alterations reacted upon his subordinates, not only as regarded himself, but as amongst themselves. The junior officer had his department and was practically supreme within it. The mere fact that these departments existed by law led, as it were, to the creation of other departments by custom. It began to be instinctively felt that it was the correct working of each department in harmony with all others that made the ship and gave her a good name. As the captain grew, of necessity, more and more a constitutional monarch, casting off continually his despotic habiliments, so did he grow to recognize responsibilities amongst his officers which were not known to him directly, even where no real department bounded his knowledge. It was inevitable that there should arise within him a sense of respect for so many of his subordinates who were specially informed where he was but generally informed. In sympathy with this, it was natural to allow that other officers not ostensibly experts in any particular branch of naval knowledge, might possibly be so, and there was a certain hesitation in attributing to them an inefficiency which had not been proved.

Then, again, contact with so many men who owed the double allegiance to him, and to the heads of their own departments, convinced the captain that his subordinates had aims of duty apart from himself indeed, but equally with himself. In the face of that conviction, the feeling of a personal moral superiority could not well exist side by side with a complete admission that superiority in knowledge could no longer be claimed, however much judgment might be matured by experience. Subjectively, therefore, the senior officer's view of the junior was attacked, and the junior, whether better or worse in reality, gained the credit of being better.

But it was impossible that the junior officer could avoid responding to the improved estimate of himself exhibited in the superior's tone. If he had formerly felt a responsibility which scarcely extended beyond the will of his superior, it became impossible to doubt that that superior perceived a something beyond his will which affected himself and his junior alike. The idea of personal service was weakened on both sides. It was less demanded on one side, and less rendered on the other. The superior officer grew continually in his own eyes and those of his juniors more of an agent and less of a principal. The junior went on to discover how much an agent he himself was. The whole theory of discipline as resulting in a well-ordered ship was gradually overturned and reversed. The old theory had been that everywhere—except, of course, in the case of the admirals, captains, and their seconds in command, on the latter of whom the chief burden of carrying out the theory fell—there was sure to be failure and collapse if the compelling and sustaining power of the senior was to be for a moment withdrawn. Such a theory is clearly set forth in the words of Sir William Parker already quoted. Comparing things major with things minor, it was the theory applied to creation before the time of Darwin. There was a creation groaning and travailing which only a sustaining hand could hold together and prevent from collapsing. It was a theory the practice of which grew by what it fed on. Originally subjective in the mind of the superior—and Sir William Parker's intense admiration for all ranks of officers in his own flagship is proof of it—it distinctly became objective in the conduct of the inferior ranks.

The opposite theory, which now governs the relations afloat,

is the Darwinian theory of creation. The ship is bursting with the energy of life. There is a struggle for efficiency in all ranks and departments. Everything is initially stable, and all that is wanted to maintain order that is natural is the reign of law.

We have, indeed, in our warships to-day a cordiality of co-operation generally pervading all ranks which is new to the navy, unless Sir Charles Napier and Sir William Parker were right, and there was in their time a real decadence, and the tone which has been recovered is that of the *temporis acti*. But this may well be doubted. There is enough on record of those days to make us believe that the tone of a ship, or a fleet, was that personally impressed on it by the commander, and that the equilibrium so maintained was not stable. It is much more likely that the higher level of *moral* upon which the naval officer of to-day stands is a new creation which could not have existed when the warship was driven by the winds, and was, internally, a simple and unchanging production.

But if the mechanical environment of fifty years ago was mainly responsible for the naval officer it produced, and if the changed environment must be charged with altering a private firm to a limited liability company, it must also be charged with greatly changing the individual character. It has done so, not merely by gradually raising the standard of an outwardly impressed education—much of that, as of softness of manners, has come into the navy from outside, and would perhaps have come into it had the marine steam engine never been invented—but by distinctly modifying the instincts, it has been like a great roller pressing out individualities and levelling all into one smooth plane. Remarkable personalities are comparatively rare in the navy of our time. There is no place for the superb eccentricities which almost inevitably distinguished equally the great and the little man who trod the man-of-war's decks in the days of yore. In society there may be a certain air about the naval officer which marks him in the eyes of those who know. But such an air is a subtle surrounding, impossible to describe in detail, so that even on the stage the naval officer is a very fine fellow merely, without any foibles for the dramatist to take hold of. How impossible is it now to imagine the admiral in command of the Mediterranean fleet (say) leading his division

into action while munching an apple, and alternating bites and puns, which was Collingwood's individuality at the battle of Trafalgar? Or who will conceive that the captain of the "Royal Sovereign" pacing the bridge of the "Majestic" beside the admiral within full but distant view of the enemy, and hearing him speak of his determination to fight at all hazards, should give him a hearty slap on the back and exclaim, "That's right, Lord Walter, and a d——n good licking we'll give them!"—which was Captain Hallowell's individuality at the battle of St. Vincent. Or who shall believe that the greatest man of the navy to-day could sit himself down to write a solemn dispatch to the Admiralty, ascribing the bad state of health in his fleet to fresh beef and vegetables and too great relaxation, and abstention from salt provisions!—which was the individuality of the great St. Vincent. Or, to drop at once to the small things—is there now a living midshipman who has had to awake the lieutenant in charge of the watch at sea, and get him to sit up in order to award a proper punishment to the look-out-man caught in the same breach of the articles of war? That was an individuality within my own experience.

It would be very easy to infer from all this that the machine-made naval officer of to-day might fail where the hand-made officer of yesterday so wonderfully succeeded. It is easy to suppose, on comparing the freedom and frankness of intercourse between senior and junior, which obtains to-day, with that extreme deference on one side and demand for it on the other which was the characteristic fifty years ago, that real discipline has suffered. It appears to me to be all the other way. In the past the junior obeyed the senior chiefly because he was afraid of him. Now he obeys because loyalty to a great cause demands it. I am sure that the latter will prove the more stable principle if it ever comes to be severely tested.

It may be more plausibly argued that this kind of constitutional practice without a real choice may hinder decision at those momentous cross-roads which war alone offers without sign posts, and where the wrong choice leads to destruction. The inference would be wholly wrong. The steam officer of to-day has a constant experience of such mental and nervous strains in the management of his machines as were comparatively rare in the life of the sailing officer. If there is less choice in decision, there is

not the twentieth part of the time allowed for acting on it that was allowed fifty or one hundred years ago. Rush, hurry, and speed, with a splendid co-ordination and order in the midst of it, is the character of the life of the modern naval officer. Action with the enemy may be a change in degree, but in kind it is no change. And the machine-made officer will prove at least as unerring as the machines which control him and have modified his personality.

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EXERCISE AND LONGEVITY.

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LIFE as commonly regarded is opposed to death, and the desire to prolong life is therefore a natural and a commendable one. It is interesting to inquire how much the present fondness for physical exercises and athletic sports is contributory to this end.

In order that we may understand what exercise does for the body it will be necessary to know something of its structure and functions. According to modern physiology, our material body is composed of innumerable atoms and cells which have been built up into various tissues, bones, muscles, organs, etc. Many of these cells correspond to the lowest forms of animal life and as such have their period of birth, activity, and death just as other living organisms do. In his simplest state a man may be regarded as a community of organisms capable of doing a certain amount of physiological work. The nature of the work consists in the maintenance of (1.) animal heat, termed calorific work, the maintenance of (2.) nervous or vital power, termed internal work, and the maintenance of (3.) mechanical energy as muscular power, termed external work.

Representing the standard of measurement by the force required to raise one pound one foot high, the amount of force expended daily by a man weighing 150 pounds in the performance of these different kinds of work has been calculated to be about 3,400 foot tons, *i. e.*, the amount of force necessary to raise 3,400 tons one foot from the ground. This expenditure is divided as follows :

Calorific work.....	2,840	foot tons.
Internal ".....	260	" "
External ".....	300	" "
	3,400	" "

In order to meet this expenditure of force and maintain a footing in the world a man must not only consume a certain amount of food, but he must see that this food is impartially distributed throughout his entire organism, and that every function gets its just share of the body's nutriment.

We have seen that only 300 foot tons of force or energy, or about 11 per cent. of the total amount available, can be expended in muscular work and still leave enough for the performance of vital functions. A consideration of the nature, amount, and method of physical exercise necessary to maintain health and secure longevity is, therefore, of vital importance.

Regarding man as a community of atoms and cells, we find, singularly enough, that he flourishes as an individual in proportion to the death of these cells. This local death is going on at every moment and in every part of the living body. Individual cells are incessantly dying and being cast off, to be replaced by others, which are as constantly coming into separate existence. This process of decay and death is greatly influenced by the activity of the bodily functions, which are all stimulated by muscular exercise.

But exercise is not only the chief agent in the destruction of the tissues ; it is also the chief agent in their renovation and repair. Through its influence on respiration and circulation new material or liquid food is hurried forward in the blood, and the waste substance resulting from the oxidation is borne away more rapidly by the same agency. Thus it may be easily shown that judicious exercise not only improves the condition of all the muscles brought into action, but through its stimulating effects upon the vital organs the health and tone of every other part of the system is improved.

If, on the other hand, the exercise is not judicious, that is, if it does not give sufficient employment to all the different muscles and organs, or if it is too partial, one sided or excessive or if it is taken under unfavorable atmospheric conditions or constrained attitudes or positions, the results which follow will not be satisfactory, but will surely tend to disease and death.

The physical effects of following too exclusively the different occupations of life furnish illustrations to the point. The sedentary life of the student, teacher, artist, clerk, lawyer, etc., gives ample opportunity for the development of the brain, but

unless some time is given to physical exercise, the brain will be nourished at the expense of the other organs. Sluggishness of the liver, constipation, and digestive troubles will soon follow, and unless relief is afforded, a diseased condition will become established.

The evil effects of using excessively small groups of muscles is illustrated in the cramps and paralyses of penmen or writers, pianists, engravers, violinists, seamstresses, and telegraph-operators. Public singers, speakers, actors, clergymen, and auctioneers are frequently sufferers from a strained and swollen condition of the vocal cords and larynx, familiarly known as "clergymen's sore throat," and musicians who play on wind instruments are subject to distension of the air cells of the lungs in consequence of the strain brought to bear upon them by the powerful use of the expiratory muscles. Porters, draymen, heavy ironworkers, and a certain class of athletes often illustrate the effects of an excessive use of the muscular system. Where the body's nutriment is expended in this direction the impairment of heart or lung tissue is likely to follow.

The results of working in a strained position of the body is shown in the lives of printers, compositors, and pressmen, shoemakers, cabinet-makers and tailors. Dyspepsia, diarrhoea, catarrh, pneumonia, and consumption are frequent among printers; while catarrh, rheumatism, and sciatica afflict the lives of the coopers. Ruptures and swollen veins in the lower extremities are common among carpenters and consumption cuts off a large portion of the cabinet-makers. Shoemakers and tailors are made flat-chested and round-shouldered by their occupations, and the muscles of the legs frequently become flaccid and withered from disuse. Constipation, sciatica, and muscular pains in the back and a predisposition to consumption are the prevailing tendencies in these two occupations.

While fresh air is an excellent thing, continuous exposure to the extremes of temperature or exposure to alternations of cold and heat, and to wind, rain, and snow renders one liable to bronchial catarrh, pneumonia, and rheumatism. Boatmen, fishermen, farm-laborers, hack, omnibus, and cart drivers are frequently afflicted with pulmonary affections and rheumatism. Bakers and cooks, blacksmiths and engineers and stokers who are exposed to extremes of heat are similarly affected.

The bad effect of inhaling impure air in the form of irritating, poisonous, or offensive vapors and gases, or of irritating and poisonous dusts of animal, vegetable, or mineral origin, may be illustrated by the prevailing disorders among the laborers in a great variety of occupations which abound at the present day. Catarrhs, bronchial affections, skin eruptions, digestive troubles, and consumption are the diseases that most afflict the workers in metals and various mineral and vegetable compounds.

These are only a few of the occupations that tend to impair health and shorten life. In many instances this unfavorable tendency is due to the poor sanitary conditions under which the work is carried on. In other cases inherited weaknesses may render some persons susceptible to disease. But, in the main, the division of labor which calls into prolonged activity only a few of the faculties at a time is largely responsible for the tendency to physical degeneracy. Where once a man's employment was sufficiently varied to give him all the activity necessary to keep him in health, he now has to give what health he has to his employment and trust to other means to keep up his physical condition.

If the individual is especially ambitious to succeed and devotes himself assiduously to his chosen work without taking time for recreation, he may win the reputation of being the most skilful mechanic, the wealthiest merchant, or the ablest lawyer in the community; but unless he is extraordinarily endowed with physical resources he will probably pay for his distinction by a disordered liver, enfeebled digestion, or weak lungs. In other words, the tendency of our civilization is to build up the trade, industry, profession, or institution at the expense of the individual.

In this respect the institution or community in the social organism resembles the individual in the human organism, and as the human organism flourishes in proportion to the activity, destruction, and renovation of its individual atoms, so the institution and the community flourish in proportion to the activity, death, and replacement of human individuals.

Where life is the most rapid and intense, civilization is most advanced, but death is the most imminent. This is familiarly illustrated in the life of our large cities, which have become like so many great furnaces where human individuals are consumed

in order to keep the machinery of our complex social organism in motion.

To many of my readers this may seem to be a rather uncheerful view of life, and it may well be asked, Is this destruction of the individual necessary? This depends upon our idea of progress and civilization. If it is deemed necessary to crowd the normal work of an age into a century in order to realize the greatest prosperity, this rapid progress can only be attained by the sacrifice of individual strength, health, and completeness.

A certain portion of our community recognize this fact and are making strenuous efforts to change the standard and realize higher ideals of human progress.

Although the division of labor narrows individual life, and in many cases restricts individual development to a few muscles and faculties, it shortens the hours of labor and presents opportunities for improvement in other directions. In communities where efforts are made to improve the physique of the individual and better the sanitary conditions of his surroundings, life has been made longer and happier. This is especially true in countries that have given attention to public health and personal hygiene.

The average life of the individual in England, for instance, has been raised from 28 to 34 years of age within the past century, in spite of the rapid growth of large cities with their inevitable crowd-poisoning and intense struggles for existence.

The establishment of working boys' clubs, church and Y. M. C. A. gymnasiums, athletic associations, and physical recreation societies has done a great deal to improve the physical condition of the masses; while the golf, tennis, rackets, horseback riding, bicycling, rowing, and the track and field sports are contributing much to the physical condition of the well-to-do classes.

The grand aim in all sports and athletic exercises should be to make them supplement as far as possible the deficiencies in one's life-work or occupation.

Where the heart or lungs are weak from inactivity or breathing poisoned air, every effort should be made to improve the condition of these organs by appropriate exercises, such as gentle running, rowing, etc. Where the muscles are soft and flabby from disuse, they should be strengthened by the use of dumb bells, Indian clubs, or chest weights, and so on through the wide range of developing and recreative exercises, which are admirably

calculated to strengthen and improve the weak points in one's organism.

Many of the athletic sports, if pursued for sport or as a recreation, are valuable remedial helps, and aid toward physical improvement. Unfortunately, the spirit of emulation in athletics, which in some communities has grown into intense rivalry, is likely to lead to excesses in training and practice for contests, which, unless checked and brought down to a rational basis, may do more harm than good. Many young men seem to think that because the practice of athletics is favorable to health the more they can get of this practice the better. This is an erroneous impression, for it is as possible to overwork in athletics as it is in business, and a great many young people do themselves injury by their excessive zeal in the practice of competitive exercise.

In this line of physical activity, as in any other, there is a limit to human capability, and it is possible to develop the muscular and nervous systems to the detriment of the heart and lungs or of the digestive system. But the conditions under which athletics are usually practised are so favorable to the maintenance of health and vigor that few persons who were sound at the time of commencing their athletic efforts have injured themselves by the practice of these vigorous exercises. It is true that a certain number of young men who were distinguished for their supremacy in certain athletic events have died young. But the number of young men who are now practising athletic exercises in this country and appearing in public contests is very large, as many as six or seven hundred entries being recorded in some of the great city meetings.

Where the yearly mortality in most of our towns and cities is about 20 to every 1,000 inhabitants, it is quite natural that the name of some young man who had practised athletics in this athletic age should be among that fatal number. It would be unwise to infer that his death was caused by athletics unless his condition was known previous to the time of his entering athletic contests, and the life he had led during his so-called athletic career. I regret to add that a great many of the physical breakdowns which are attributed to athletics have their origin in irregular, and in some cases dissolute, habits of living. Every man who rises to eminence in his trade or profession must

undergo necessarily more than the ordinary mental and physical strains of life. Notwithstanding this fact, some of the foremost men of the world have exceeded the allotted period of three score years and ten. Perhaps their lengthened lives were the important factor that contributed to their eminence.

Some of these men have been noted for their great athletic vigor as well as their intellectual achievements. Such men were Brougham, Lyndhurst, Peel, Campbell, Graham, and Palmerston, of England. Sir Walter Scott and Professor Wilson and Robert Burns, of Scotland, were also distinguished for their athletic abilities. So were Gladstone and Bismarck of the present day.

To come nearer home for illustrations of prominent men of old age who practised systematic physical exercises, reference may be made to the poet Bryant, who used his dumb bells daily up to the time of his death, though he lived to be 84.

The historian Parkman was a good boxer while in college, and kept up some form of physical exercise throughout his life. He died aged sixty years.

The leading essayist in America to-day, who is now verging on his seventy-fourth year, has always been fond of gymnastics and athletic sports, and took his daily swim in summer time until a few years ago.

The president of one of our foremost universities, and a distinguished scientist and patron of education, who are both past sixty, were prominent oarsmen in college, and now have recourse to yachting and horseback riding to keep them in good working condition.

An eminent naturalist, and one of the hardest-working men whom it is my pleasure to know, was a good all-round athlete in his younger days, though originally not of a strong constitution. Only a year or two since, while making a geological survey off the coast of Florida, he was capsized and remained in the water swimming and clinging to the boat for several hours. Although now approaching sixty years of age, he is in regular attendance at the college gymnasium, and takes his exercise energetically and systematically.

The effect of practising violent forms of competitive exercise for a considerable period of one's life is commonly supposed to be injurious. No less an authority than Dr. Benjamin Ward Richardson says in his "Diseases of Modern Life" that "there is

not in England a trained professional athlete of the age of thirty-five, who has been ten years at his calling, who is not disabled."

We cannot help thinking that his statement is an exaggeration. While it may be true that men beyond thirty-five years of age very rarely attain championships in any athletic contests, men who have attained great distinction as athletes frequently live and enjoy good health up to sixty, seventy, eighty, and even ninety years of age.

Henry Clasper, the English oarsman, rowed in 110 different races, most of them over four miles in length, and won several after he was forty-seven. William Belden, the Nestor of cricket, lived to be ninety-six. John Bowyer, another famous cricketer, lived to be over ninety. James Taylor, another excellent oarsman of England, rowed in 112 different races. Jem Ward, the English pugilist, died at ninety-five, and Jem Mace, at one time the English champion, is still living and teaching sparring, although he is seventy-six.

Blondin, the French gymnast who crossed Niagara on the tight rope in 1855, '59, and '60, died but lately at seventy-two years of age. Many of the distinguished circus performers in England lived to be well along in old age, including the great Astley, who died at seventy-two; Pablo Fanque, at seventy-five; Madam Saqui, at eighty, and Saunders, at ninety-two.

In our own country many of the old circus performers are still living. Perhaps one of the most distinguished is Eaton Stone, the once famous bare-back rider. He is now living in New Jersey, aged eighty-one. Many professional athletes and instructors in physical exercises can be recalled who have certainly been subjected at times during their lives to great physical strain. Among this number may be mentioned Wm. Wood, of New York city, who is now living and in active business at the age of seventy-eight; Professor Andrews, of Brooklyn, who is still teaching gymnastics at sixty-one; and George Goldie, of Princeton College, who is also engaged actively in teaching and performing heavy gymnastics at the age of fifty-six. There are several prominent Scotch athletes in America who are now over seventy years of age.

Among amateur athletes who have passed middle life may be mentioned William B. Curtis, of New York. Mr. Curtis has probably engaged in a wider range of athletic exercises and kept

in practice a longer term of years than any other man in America. For this reason he is frequently referred to by the younger generation as the "father of athletics." Notwithstanding his violent physical efforts in the past he is able at the age of sixty to accomplish a large amount of intellectual work and still enjoy vigorous exercise in walking, swimming, and skating.

In one or two cases I have known of men actually acquiring an increase of physical vigor and physical measurements after the age of sixty by the practice of systematic exercises. Mr. Smith Robertson, of Eau Claire, Wis., a man five feet eight inches in height and weighing 140 pounds, began systematic exercise with 10-pound dumb bells and a horizontal bar when sixty-nine years of age. He worked with this apparatus for about ten minutes a day, and walked from four to six miles a day regularly for a period of three years. At the end of this time he found that his weight had increased from 140 to 160 pounds, his chest measurement had increased from 36 to 40 inches, and all the other muscles of the body proportionately. At the present time he weighs 165 pounds and is 83 years of age, yet he writes me that he can walk or run almost as easily, and with apparently the same elasticity, as 50 or 60 years ago.

Upon reviewing the lives of these prominent athletes and gymnasts, many of whom I have known personally, the facts that come most prominently to my mind are the wide range of exercises in which they have engaged and the sensible way in which they have taken care of themselves, even under unfavorable conditions.

From these observations I think we may conclude that violent physical efforts are not incompatible with the attainment of a fairly long life, provided the individual has a sound constitution to start with, strengthens his whole system by the practice of a variety of exercises, and gives careful attention to his habits of living. Nevertheless, as very few persons are endowed with the constitutions out of which athletes are made, it would be a safe rule for most persons to refrain from indulgence in violent physical efforts if they value their health and desire longevity.

The body as a whole is no stronger than its weakest part, and when a person is subjected to a severe strain it is the weak spot that is likely to give way, and lay the foundation for disease. Instead of working under high pressure for a short time, much

more can be accomplished, and with less risk to health, by working under a low pressure for a longer time.

In my opinion the chief requisites are that the working conditions be as favorable as possible, and that the efforts be sufficiently varied to bring all of the bodily functions into action : oft-repeated efforts of mind and body with frequent intervals of rest.

“ By ceaseless action all that is subsists.
Constant rotation of the unwearied wheel
That Nature rides upon, maintains her wealth,
Her beauty, her fertility. She dreads
An instant's pause, and lives but while she moves.”

According to our premises, there is no other way in which the individual parts of the organism can be properly nourished and sustained except by activity, and upon the health and tone of the individual units depend the health, strength, and endurance of the body as a whole.

D. A. SARGENT.

PROGRESS OF THE UNITED STATES.

I.—THE NEW ENGLAND STATES.

BY MICHAEL G. MULHALL, F. S. S.

THE progress of the United States in the last fifty years so far surpasses that of any other nation in ancient or modern times, whether viewed in regard to population, or to industry and wealth, that the subject is one of extraordinary interest, not only to Americans, but to European spectators. In order more closely to study the subject we may consider the Union as composed of five great communities,* viz., New England, the Middle, the Southern, the Prairie, and the Pacific States. All have advanced, although not equally nor in the same direction, and all give promise of steady development in the future.

Beginning with the New England States, we have to consider the smallest of the communities in question, since the collective area of the six States hardly exceeds that of Florida. It is, however, in some respects the most interesting; its historical associations include Plymouth Rock and Bunker's Hill; its academic and literary glories shed a light over the whole Union, and its cities and towns have been the cradle of manufacturing industry in the New World.

Population—The population of New England has not quite doubled in the last half century, while that of the Union has more than trebled; but this is not surprising, since the room for expansion is less, the density of population being 75 persons to

* New England comprises Maine, New Hampshire, Vermont, Rhode Island, Connecticut and Massachusetts. The Middle States are New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia. The Southern include the two Virginias, the two Carolinas, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, Kentucky, and Tennessee. The Prairie States include Ohio, Illinois, Missouri, Indiana, Iowa, Michigan, Wisconsin, Minnesota, Kansas, Nebraska, and two Dakotas; and the Pacific States, California, Oregon, Nevada, Colorado, Washington, Montana, Utah, New Mexico, Idaho, Arizona, and Wyoming.

the square mile, while it is only 23 for the whole Union. Progress since 1850 is shown thus :

	1850.	1890.	1897 (Est.).
Maine.....	585,000	661,000	670,000
New Hampshire.....	320,000	376,000	405,000
Vermont.....	315,000	382,000	335,000
Rhode Island.....	150,000	348,000	410,000
Connecticut.....	370,000	748,000	790,000
Massachusetts.....	995,000	2,289,000	2,590,000
Total.....	2,735,000	4,700,000	5,200,000

We have the strongest evidence of the assimilating character of American institutions in the fact that New England is typical of the American people, although half the population is composed of immigrants and their children, the census of 1890 showing :

Foreign settlers.....	1,142,000
Their children.....	1,069,000
Americans.....	2,489,000
Total.....	4,700,000

No less than 70 per cent. of foreign settlers (793,000) consisted of Canadians and Irish, two races that appear to coalesce with Americans more readily than any others. Meantime the character of the New England people has undergone a remarkable change since 1850, the increase of manufactures having been attended with a decline of agriculture, and hence urban population (that is of all towns over 10,000 population) has more than doubled since 1870 while rural has stood still, viz.:

	Urban.		Rural.	
	1870.	1890.	1870.	1890.
Maine.....	74,000	113,000	553,000	548,000
New Hampshire.....	46,000	93,000	272,000	283,000
Vermont.....	14,000	27,000	317,000	305,000
Rhode Island.....	104,000	247,000	113,000	99,000
Connecticut.....	147,000	352,000	390,000	394,000
Massachusetts.....	690,000	1,444,000	767,000	795,000
Total.....	1,075,000	2,276,000	2,412,000	2,424,000

The rapid growth of towns has coincided with a great influx of immigrants from Europe, and thus it has come to pass that the American population has declined from 66 per cent. of the total in 1870 to 53 per cent. in 1890. In other words, the census re-

turns show that in 20 years the number of Americans had increased very little, viz. :

	1870.	1890.	Increase, per cent.
Foreign settlers.....	642,000	1,142,000	78
Their children.....	496,000	1,069,000	115
Americans.....	2,342,000	2,489,000	6
Total.....	3,487,000	4,700,000	35

If we seek to ascertain the cause why the American population does not increase in New England as it does in other parts of the Union, we are almost forced to conclude that Jonathan prefers agriculture to manufactures, and that in the last 25 years some thousands of New Englanders have gone West, and given over their old farms to Canadians, whose number has increased so much that in 1890 they formed 8 per cent. of the whole population.

Agriculture.—This branch of industry has considerably lost ground in New England since 1850, owing to the opening up of the Western States, the cultivated area having declined, and the production of food diminished as follows :

	1850.	1893.	Diminution.
Grain, tons	525,000	470,000	55,000
Potatoes.....	480,000	460,000	20,000
Meat.....	108,000	81,000	27,000

So limited is now the production of breadstuffs that the total grain crop of New England would hardly suffice to feed the population of Connecticut; and as to meat the quantity produced yearly is less than what is consumed in four months. In fact, agriculture is an industry of secondary importance, the cultivated area not exceeding one-fourth of New England, and a large number of the rural population, especially in Maine, preferring to occupy themselves in felling timber. If it were not for the Western States the people of New England would find themselves, as regards food-supply, in the same position as the inhabitants of Great Britain, who mainly depend on foreign countries for grain and meat. Comparing the official returns of 1890 with those of 1850 we find that in New England the size of farms has diminished, viz. :

	No. of Farms.	Acres.	Average, acres.
1850.....	187,700	11,150,000	67
1890.....	190,100	10,740,000	56

This is apparently due to an increase of dairy-farms, for we observe that although horned cattle declined by 60,000 head, the number of milch-cows rose from 608,000 to 821,000, an increase of 35 per cent. Nevertheless, the number is still insufficient to supply the population with milk and butter, as there should be at least one milch-cow for every five inhabitants, say 1,040,000. If we sum up the value of all farm products in the six New England States, we find approximately as follows:

	Tons.	Values.
Grain	470,000	\$9,900,000
Potatoes.....	460,000	11,300,000
Meat and tallow.....	96,000	15,000,000
Hay.....	4,100,000	58,100,000
Dairy products.....		32,900,000
Sundries.....		25,400,000
Total.....		\$152,000,000

The gross result gives an average of \$800 to each farm, equal to \$14 per acre, the average for the whole Union being \$850 per farm and only \$11 per acre, from which it appears that the smaller the farm the greater product per acre, the average size of American farms being 78 acres, that is 40 per cent. more than in New England. Coincident with the diminution of New England farms there has been a remarkable rise in the value of land, the census of 1890 showing an increase of 150 million dollars in farming capital since 1850. The following table gives the total value of farms and live-stock in each State, as well as the average of land per acre :

	Millions dollars.		Dollars per acre.	
	1850.	1890.	1850.	1890.
Maine.....	67	122	27	33
New Hampshire.....	66	80	24	33
Vermont.....	79	102	24	30
Rhode Island.....	19	25	47	81
Connecticut.....	82	108	41	69
Massachusetts.....	122	148	51	77
Total.....	435	585	34	46

The increase of dairy farming has, therefore, greatly enhanced the value of land, to the benefit of the farmers, each farm now representing a capital value of \$3,070, against \$2,510 in 1850.

Manufactures.—This is by far the most important of all New England industries, and shows a rapid increase in each decennial period, the value of output having quintupled since 1850, viz. :

	—Millions dollars.—	
	Product.	Wages.
1850.....	283	77
1890.....	1,499	415

The magnitude of this industry is such that, relatively to population, no European country rivals New England in manufactures, as the following table* shows :

	Millions dollars.	Population.	Dollars per inhabitant.
New England.....	1,499	4,700,000	319
Great Britain.....	4,022	35,100,000	115
France.....	2,560	33,500,000	74
Germany.....	3,310	52,200,000	63
Belgium.....	566	6,400,000	88

The ratio that corresponds to New England is three times that of Great Britain, four times that of France, five times that of Germany. The relative progress, moreover, has been much greater in New England than in Great Britain, viz.:

	Millions dollars.		Dollars per inhabitant.	
	1850.	1890.	1850.	1890.
New England.....	283	1,499	104	319
Great Britain.....	2,235	4,022	111	115

British manufactures have done little more than keep pace with population, while those of New England show a ratio per inhabitant three times as great as in 1850. Massachusetts stands for 60 per cent. of the total, and Connecticut comes second, but with reference to population Rhode Island shows a higher ratio of manufactures per inhabitant than either of the preceding States, viz.:

	Millions dollars.	Dollars per inhabitant.
Massachusetts.....	888	393
Connecticut.....	243	333
Rhode Island.....	143	412
Other three States.....	230	160
New England.....	1,499	319

Textiles constitute one-fourth of the total, cottons and woollens being almost equal, and other fibers insignificant. Boot-making is also carried on, to a degree that eclipses all European nations. These two industries compare with the same in Europe thus :

	Millions dollars.		Dollars per inhabitant.	
	Textiles.	Boots.	Textiles.	Boots.
New England.....	360	167	76	36
Great Britain.....	833	144	25	4
France.....	552	110	14	3
Germany.....	518	158	10	3

* For amount of manufactures in European countries, see *Industries and Wealth of Nations*, 1896 (Longmans & Co., London and New York).

When we observe that New England turns out more boots and shoes than Great Britain, France, or Germany it is easy to understand the marvellous development of manufactures in this part of the New World. Nor is it less satisfactory to see that the wages of operatives have risen in higher ratio than the output. The number of hands employed was 313,000 in 1850, and 885,000 in 1890; the ratios of product and of wages were, therefore, as follows:

	Dollars per operative.		Increase, per cent.
	1850.	1890.	
Product.....	903	1,694	87
Wages.....	246	469	91

Wages averaged in 1890 per week exactly \$9, the average throughout the United States having been \$9.30; these rates are much higher than those in Europe, and as the cost of food is less, the New England operative is in a much better position than factory hands in Great Britain, France, or Germany.

Railways.—Massachusetts laid down the first railway in the New World, and in 1896 New England possessed 7,660 miles in traffic, the construction and equipment of which cost 433 million dollars. Compared with area New England has not so many miles of railway as Great Britain or France, but much more as compared with population: thus, 100,000 inhabitants have in Great Britain 52, in Germany 54, in France 56, and in New England 150 miles of railway. Nevertheless this ratio is less than for the whole Union, which has 250 miles of line for every 100,000 souls.

Banking.—It was ascertained in 1890 that National Banks transacted 70 percent., other banks 30 per cent., of the total discounts. On this basis the discounts of the several States in 1894 would be as follows (as we have only returns for the National Banks in that year), and the subjoined table also shows the amount of savings banks' deposits in 1894:

	Millions dollars.		Dollars per inhabitant.	
	Discounts.	Deposits, S. B.	Discounts.	Deposits, S. B.
Maine.....	30	53	46	81
New Hampshire....	16	71	41	186
Vermont.....	18	28	54	84
Rhode Island.....	51	69	146	198
Connecticut.....	65	134	87	176
Massachusetts.....	374	400	166	178
New England.....	554	755	111	151

Banking is here more fully developed than in other parts of the Union, as we see in the following table (1894):

States.	Discounts, millions dollars.	Population.	Dollars per head.
New England.....	554	5,000,000	111
Middle.....	1,050	15,000,000	70
South.....	220	20,000,000	11
West*.....	1,026	29,000,000	35
Union.....	2,850	69,000,000	41

New England stands for one-fifth of the banking-power of the Union, although her population is only one-fourteenth; that that is to say, each New Englander represents in banking matters as much as three ordinary American citizens. The savings banks returns afford an eloquent proof of the industrious and thrifty habits of the people, New England counting 2,082,000 depositors, equal to 42 per cent. of the population, as compared with 22 per cent. in Great Britain. The amount of deposits compares with the same in European countries thus:

	Millions dollars.	Dollars per inhabitant.
New England.....	755	151
Great Britain.....	648	18
Prussia.....	850	27
France.....	754	19

At least two-thirds of the depositors evidently belong to the working classes, since the number of the former is equal to 63 per cent. of the adult population, male and female. Hence we may conclude that the toiling millions are much better off in New England than in Europe.

Wealth.—The components of wealth, according to the census of 1890, in the several States were as follows:

	Millions dollars.					Dollars per inhabitant.
	Farms.	Houses.	Railways.	Sundries.	Total.	
Maine.....	122	182	70	138	489	740
New Hampshire...	80	141	59	59	325	860
Vermont.....	102	66	49	71	266	800
Rhode Island.....	25	388	13	81	504	1,460
Connecticut.....	108	535	55	150	835	1,120
Massachusetts.....	148	2,079	114	483	2,804	1,235
New England.....	585	3,391	360	982	5,223	1,112

It appears that individual wealth is almost twice as much in Rhode Island or Massachusetts as in Maine, which is what might be expected, since urban population preponderates in the two States first mentioned, while rural forms 80 per cent. in Maine.

* The West here comprises the 12 Prairie and 11 Pacific States.

Agricultural capital is only 11 per cent. of the total wealth of New England, and this is even a lower ratio than in Great Britain, where it stands for 15 per cent. The accumulation of wealth in New England in forty years was slower than in the Middle and Western States, the census returns showing the averages that fell to each inhabitant in 1850 and 1890 as follows :

	1850, dollars per head.	1890, dollars per head.	Annual increase, dollars per head.
New England.....	413	1,112	28.30
Middle States.....	340	1,260	33.50
South.....	314	539	14.50
West*.....	208	1,262	49.10

Meantime the accumulation in New England has been much greater than in European countries, namely \$22 in Great Britain, and \$18 in France, per inhabitant yearly, from 1850 till 1890. If we compare New England with the two richest countries in Europe we find as follows :

	Dollars per inhabitant.		
	New England.	Great Britain.	France.
Real property.....	635	523	590
Personal.....	477	1,003	620
Total.....	1,112	1,526	1,210

The amount of property in New England covered by insurance in 1890 reached 3,217 millions of dollars, equal to \$685 per inhabitant, which is a much higher ratio than in European countries.

Mortgages existing in 1890 amounted to 520 million dollars, or 17 per cent. of the value of real estate ; they were equal to 21 per cent. on farms, 15 per cent on house property. Farms were more heavily encumbered in Massachusetts than elsewhere, mortgages representing 33 per cent. of their value. The interest paid on the sum total of mortgages, urban and rural, was equal to a yearly tax of \$6.20 per inhabitant. The following table compares mortgages with total wealth in each State :

	Dollars per inhabitant.		Ratio of mortgage.
	Wealth.	Mortgage.	
Maine.....	740	49	6.6
New Hampshire.....	860	51	6.0
Vermont.....	800	85	10.6
Rhode Island.....	1,460	107	7.3
Connecticut.....	1,120	107	9.5
Massachusetts.....	1,235	144	11.6
New England.....	1,112	110	9.9

*The West here comprises the 12 Prairie and 11 Pacific States.

According to the census of 1890 the mortgages in the whole Union amounted to 6,020 millions, equal to \$95 per inhabitant, and to $9\frac{1}{4}$ per cent. of the total wealth of the nation ; from which it appears that New England is somewhat more heavily mortgaged than the Union at large.

Finances.—The aggregate of State and local taxes in 1890 was $52\frac{1}{2}$ million dollars, that is a little over 11 dollars per inhabitant, the United States revenue in the same year being equal to $7\frac{1}{2}$ dollars per head. Comparing the total burden of taxation with the same in European countries we find :

	Taxation, dollars, per inhabitant.		
	National.	Local.	Total.
New England.....	7.50	11.20	18.70
United Kingdom.....	12.70	5.50	18.20
France.....	15.20	5.60	20.80
Germany.....	10.60	4.50	15.10

One cause why local taxation is heavy in New England is the very liberal expenditure for education, which is rightly considered a matter of paramount importance.

Education.—New England has always been so renowned for intellectual preëminence that Boston is aptly termed the Athens of the New World. Apart from the academic lustre of Harvard and Yale universities, there is an atmosphere of science and letters, especially in Massachusetts, characteristic of a highly cultivated people. Whoever visits the homes of the work-people at Lowell and other cities will find on their shelves the masterpieces of English literature. New England spends 14 million dollars yearly in public instruction, say 3 dollars per inhabitant, as compared with \$1.30 in Great Britain and 80 cents in France. The result is that 94 per cent. of all persons over 10 years of age can read and write ; the ratio would be even higher but for the number of illiterate persons from Europe, as the census of 1890 shows :

	Pop. over 10 years.	Illiterates.	Do. per cent.
Americans.....	2,775,000	47,100	1.7
Foreigners.....	1,085,000	196,400	18.1
Total.....	3,860,000	243,500	6.3

Thus we see that more than 98 per cent. of Americans of New England can read and write, the average for Americans in the Union generally being 94 per cent. And here I include among

Americans the colored population, which comprises the great bulk of illiterates of native birth.

Completing the survey of New England we find that she has little to envy in other communities, and much to be proud of, as well as to thank Heaven for. It is true that she has not the boundless prairies of the West, nor Sierras teeming with precious metals, but she seems to possess in the racial character of her people and in the nature of her climate, no less than in her geographical situation, unquestionable advantages for the development of industry and the enjoyment of the blessings thereon attendant.

MICHAEL G. MULHALL.

THE DINGLEY TARIFF BILL.

BY THE HON. ROBERT P. PORTER, MEMBER OF THE TARIFF COMMISSION OF 1892.

THE framing of a tariff law, with all the delicate questions of public revenue which are interwoven with it, constitutes the most difficult and the most complicated problem that statesmanship has to deal with. Every statesman since the war who has been called upon to grapple with this question has either wrecked his party or himself, or both, before he was through with the job. The Hon. William D. Kelley, who was responsible for the Tariff Commission law of 1883, was not personally defeated, but his party suffered defeat at the next election. Morrison's two abortive tariff bills resulted in his defeat and retirement from Congress. The efforts of Roger Q. Mills in this direction, aided and abetted by President Cleveland, brought Democratic defeat in 1888, elected a Republican President, and returned the Republican party to power. Then came the famous McKinley tariff of 1890, in some respects a more judicious measure than the law of 1883, followed by the overwhelming defeat of the party enacting it at the following congressional election, and the temporary retirement from public life of its author. The effect of this legislation seems to have been carried forward into the Presidential election of 1892, and in spite of the prosperous condition of the country, the enemies of protection prevailed, and the party of free trade found itself in full possession of the government. With the advent of the Democratic party, Mr. Wilson came to the front, and the passage of the so-called Wilson-Gorman tariff act as usual sounded the death-knell of the new and rising statesman whose name became identified with the measure. History repeated itself. The law came into force in the early fall of 1894, and the following

November Mr. Wilson and all the other prominent advocates of the measure were swept out on a tidal wave higher and more disastrous to the party than the one that swept out the author and advocates of the McKinley law four years previous.

If these historic facts count for anything, they clearly indicate that tariff legislation is "extra hazardous" and that statesmen who undertake such dangerous economic work must be prepared for the rebound. They furthermore suggest that the minds of the people have become so completely perplexed by the exaggerated claims of the rival advocates of the two fiscal theories that it requires but a small pressure of adverse business conditions to swing the political pendulum from one extreme to the other. The protectionist points to the facts and vehemently declares that the prosperity of the country depends absolutely upon his policy. The free trader unfolds his theories, and with equal vehemence contends we can have no permanent prosperity until trade is free and all custom-houses abolished. And while the two sides are loudly proclaiming, the country is suffering from a more serious complaint than whether the duty on tooth brushes shall be 25 or 30 per cent., namely, an utter lack of business stability. These tariff hearings and threatened changes and actual changes of methods of collecting duties, of classification, and of rates of duty are simply playing havoc with business generally. Such never-ending changes must stop, and some sort of certainty be inaugurated before we can hope for permanent prosperity.

In 1882, as a member and secretary of the Tariff Commission, the writer first realized the magnitude and ramifications of the tariff laws. In some way or another, they affect the lives of millions of human beings. The interests involved in any changes of these laws are our entire foreign commerce—that is all our business with foreign countries. At home the tariff schedules cover manufacturing, mining, and fishing interests involving the actual employment of six or seven millions of people. Indirectly these laws affect nearly all our railways. Whether an article is made at home, and the material from which it is manufactured assembled at one point by our railways, or landed in a finished condition at some port, is a vital question to those engaged in transportation. The tariff likewise affects the agriculturist, directly by reason of a duty on his products, and indirectly because anything that brings prosperity to the nation improves the condition

of the farmer. The folly of subjecting these stupendous interests, involving the whole business of a nation of over seventy millions of people, to such periodical changes upward and downward is self-evident. The wonder is the people do not rise in their might and make it a penal offence, after the passage of the Dingley bill, for any person, statesman or otherwise, to talk protection or free trade for the period of ten years. "Let the tariff rest" should be the watchword when the bill made imperative to increase the revenue has become a law.

The tariff of 1897 may be said to have met with the customary opposition accorded such measures. Its schedules have been dissected with the usual vigor. While, on the one hand, it has been greeted by a chorus of complaints from importing interests, which will suffer both by increased duties and by changes from *ad valorem* to specific rates of duty, and from the representatives of foreign governments naturally adverse to higher duties, on the other hand, we have a much louder chorus of praise from the native producer. The fundamental difference between the Dingley bill and the Wilson-Gorman bill of 1894 is that there was no particular reason for the passage of the latter; whereas an absolute necessity exists for the speedy passage of the former. The effect on the country of the discussion of the Wilson bill should have warned the party in power that their proposed experiment was likely to prove a dangerous and costly one to the nation. Long before the bill passed, the "objectlesson" had been noted, and the people wanted it reversed. It was a clear case of the patient's recovery from an imaginary illness on the arrival of the doctor. With the power in their hands, however, Mr. Wilson and his doctrinaire colleagues were determined to put the knife in, no matter where it cut nor how much blood it drew. It was an exemplification of their pet science in the destruction of the great productive interests of the country that these apostles of bankruptcy were after. The scars of that operation will not be effaced until this generation are in their graves.

The whole theory of the Wilson tariff from its inception was wrong. This is not said in a partisan spirit, but from a business point of view. First, it was laid out without proper consideration. The framers started with the idea of low duties, a big free list, and an income tax to make up the deficiency. Secretary Carlisle, an experienced tariff expert, called a halt to this,

and demonstrated that the proposed measure would result in an annual deficiency of probably \$100,000,000. His astute mind also foresaw and he warned these gentlemen that the income tax with the \$4,000 limitation clause in it would never stand. Then the patching began. Sugar was taken from the free list and put on the dutiable list; the same with iron ore and coal. Wool and lumber and cotton ties and some other things got left in the shuffle. The whole bill, as it finally passed, was scientifically, statistically, and politically a misfit. Nor could it have been otherwise. You cannot patch a tariff. It must be built up true to some lines and in accordance with some principles. You must know what revenue is needed. You must decide the relative proportion which your free list is to bear to the dutiable. You must ever have in view the necessity of levying duties so that they may be collected with certainty. You must bear in mind that a tariff in which the duties are specific is a constantly stiffening tariff, and yields increasing revenue, whereas the tendency of an *ad valorem* tariff is the reverse. I think the present tariff has demonstrated that the administration of the law, that is, the collection of the duties, is as important as the rate of duties. A tariff, to be fully protective, should protect American importers as much as American manufacturers and American wage-earners.

The present tariff law finds no defenders because, besides being inadequate from a revenue point of view and insufficient to protect the American producer, it has struck a deadly blow at our great importing interests. The American importer is threatened with annihilation because the present tariff law has repealed so many of the safeguards which experience has shown are necessary in the collection of duties. The recent hearings before the Ways and Means Committee show that the lawmakers of 1894 did things which in many respects were even worse than the reduction of rates of duty. By ill-considered and unaccountable changes of classification, and the use of obscure definitions and terms, as well as by the wholesale discarding of specific and compound rates of duty and the substitution of *ad valorem* rates, they not only produced a legislative hodge-podge, but deprived the government of at least a sixth of the revenue which it was estimated the law would secure, robbed domestic industries of a large share of the protection which the law ostensibly gave to

them, and seriously injured and crippled the business of honest importers. Under this law the revenue has gradually declined until to-day the country is brought face to face with an annual deficiency of over \$65,000,000.

Necessity, not the desire for an experiment, confronted the Republican party when President McKinley called the special session of Congress to provide revenue for the government. The primary motive of the Dingley bill is to furnish the government revenue, and, as far as possible, to restore protection to industries which were ruthlessly stricken down by the present law. The hue and cry raised against the bill in certain quarters cannot be regarded as evidence against it. In 1883, the same attacks, clothed in precisely the same language, published in the same newspapers and emanating from the same sources, greeted the proposed bill of the Tariff Commission. Seven years later, when the McKinley bill was under consideration, the same critics were pointing to the Commission's report and its proposed law as wise and conservative, and the McKinley law was held up as the embodiment of retroaction and economic iniquity. Four years later, after a taste of the present tariff law, the populace flocked by hundreds of thousands to hear McKinley on the tariff question, demanding the re-enactment of the law of 1890, or something even more radical, and the election of the author to the highest office in the gift of the people. Whatever may be said of the Presidential campaign of 1896, it is certain that the Ohio State campaign of 1893, the Congressional campaign of 1894, and the several important State campaigns of 1895, were fought out with William McKinley and the tariff policy he represented as the vital issue, and won by large majorities on the protection issue and that issue alone. The Dingley bill needs no apologist. It comes in answer to the demand of a majority of the people of the United States, as expressed in four decisive campaigns, State, congressional, and national—that is, the campaigns of 1893, 1894, 1895, and 1896. It comes, moreover, in answer to the demands of the people that the national revenue shall be sufficient at all times to pay the expenses of the government as we go, and that American labor shall be protected against the labor of workmen receiving a lower rate of wages and living under different environments to the laborers of the United States. So long, therefore, as the Dingley law shall keep reasonably within

the bounds of these general requirements, it must be regarded not in the light of an economic experiment, but as the fulfilment of promises made by a great party to the people during a presidential campaign. A presidential campaign, be it remembered, preceded by three other more or less important contests, all of which were won by large majorities on the tariff question.

Having established its right of way, the next step is to decide whether or not the bill meets the requirements as above indicated. There is a difference of opinion on this point. It is contended that the bill is too highly protective. The same claim, with even greater vigor, was set up against the McKinley bill. And yet, from the non-dutiable point of view, the McKinley law was the greatest free trade measure this country has ever known. Under it the free list was increased from about one-third of our total imports in 1890 to six-tenths in 1894. In other words, for every hundred dollars of imports, sixty dollars' worth came in free under the McKinley law. Much of the criticism of the McKinley law has turned out unjust criticism, and some of the more fair-minded of its critics have admitted the truth of this assertion. Looking back to 1867 and 1868, when less than five per cent. came in duty free, we must realize that radical changes had been brought about—changes, too, that were surely in the interest of that broader trade and commerce which our free trade brethren delight to dilate upon. The wonder is that the free traders themselves have not made McKinley their patron saint, for the *per capita* duty collected the last year of the McKinley bill was lower than in any year since 1862, namely, \$1.89; and, of course, has gone up to \$2.20 under the present law. Under this same McKinley law the average *ad valorem* rate of duty on dutiable and free articles also reached the lowest point since the war, namely, 20.25 per cent. in 1894. It was a trifle lower, 20.23 per cent. in 1895, but in 1896 it increased slightly—20.67 per cent. So the McKinley law, by reason of its extended free list, gave us 60 per cent. of our imports free; it gave us the lowest *per capita* duty collected since the war and practically the lowest average *ad valorem* rates on all imported merchandise. The assailants of the Dingley bill would do well to recall these facts before their assaults reach the same degree of malignity which they did in 1890 when the McKinley bill was the object of abuse. Their great expectations of disaster and terrible prophecies of foreign

retaliation were wrong then, and may they not be wrong now? Their own panacea for the imaginary troubles which beset us—the Wilson-Gorman law—has proved a lamentable failure. Have we any assurance now that a similar measure, or a continuation of it, will relieve the real troubles that have fallen fast and thick upon the country since the party of free trade took the helm in 1893. We cannot trust either to luck or to the sale of bonds for revenue to pay current expenses when the way is open to us to raise by the taxation of foreign imports sufficient revenue to pay all the expenses of the national government.

The Dingley bill will undoubtedly raise sufficient revenue. It has been framed from the bottom up with the revenue idea fully in mind. In the four years ending the 30th of June next, we have run behind in our revenue over \$200,000,000—or at the rate of \$50,000,000 per annum. The coming fiscal year shows signs of increased deficiency. The revenue from imports is estimated at only \$140,000,000 as against \$203,000,000 for the year ended June 30, 1893. The problem which confronted Mr. Dingley and which now confronts the Senate Finance Committee is to so frame the tariff as to make up about \$65,000,000, or to be on the safe side, say \$75,000,000. Mr. Dingley secures the needed revenue in a variety of ways. First, he has changed the *ad valorem* rate of duty, wherever possible, to specific rates, thus insuring a more honest administration of our customs laws. In this way it has been variously estimated he will secure from \$20,000,000 to \$25,000,000 per annum now lost by the government by reason of undervaluation and frauds. In making these changes, the author of the bill has brought down upon himself the violent opposition of thousands of dishonest importers who gain no advantage over their more honest competitors under a law in which specific rates predominate. In this category we find the most vicious opponents of the bill. Next Mr. Dingley has gone to the sugar schedule, and by a just revision of the rates and a return to specific duties, he proposes to secure an additional \$20,000,000. Under the present law there has been a decrease of about \$20,000,000 in duties obtained from the wool and woollen schedule, and this it is proposed to recover by a practical return to the schedule of the McKinley law.

A strong fight has been put up against the proposed changes in the wool and woollen schedules, but it would seem to be

the only practical way out of the dilemma, and after a careful study of the situation the Senate Committee will come to substantially the same conclusion. If these three changes yield the amount of additional revenue anticipated, the problem is practically solved, for we have here \$65,000,000. They may not; so, to make sure, Mr. Dingley has raised the rates in the spirits and tobacco schedules, put lumber back on the dutiable list, from whence it should never have been taken, and tightened up several other schedules, both with a view of increasing the revenue and of encouraging home industry. In two important schedules, those of iron and steel, and of manufactures of cotton, the present law has not been materially changed. Throughout this bill, there has been no attempt to throttle industry by "taxing raw material" as some claim. Wool, lumber, and some other articles have been returned to the dutiable list, but all these industries were in a deplorable condition during the period the so-called "raw material" has been on the free list. Moreover, the progress of our manufacturing industries has undoubtedly been greatest during the period of a high protective tariff. If facts, history, and experience are of any value in solving a question like this, they are all on the side of a high protective tariff. The free trader has been pointing, with some degree of pride, to the increase of the exportation of manufactured articles during recent years. This increase is more apparent than real, and is obtained by including copper ingots, exports of oil, and like articles which are not affected one way or the other by the tariff. They do not and indeed can not point to any increase in the exportation of woollen goods or any other manufactured article which may be directly traced to a reduced duty—or the so-called freeing of the raw material. Nor does such argument cut any figure when applied to our export trade, because a rebate of 99 per cent. is allowed on the raw material or on any other imported material entering into exports of manufactures. On the contrary, free wool has injured rather than benefited our woollen manufacturers, and the whole argument in favor of free "raw material" has been effectually exploded by the practical miscarriage of the plan inaugurated by those who once so strongly advocated it. And this, in fact, is the last leg the free trader has to stand upon. The results of the folly of 1894 cling so persistent-

ly to our once active centres of industrial energy that the boldest free trader hesitates to push his theories, and instead clings tenaciously to the old error that "free raw materials" will soon give us the markets of the world, while it will inflict no loss on those who produce them in our own country. The answer to this argument may be found in the complete failure of the doctrine to achieve results since it has been put into operation.

The Dingley bill, which, with some modifications looking toward a greater degree of liberality in certain unimportant schedules, will become the tariff law of 1897. It meets the requirements of a reasonable tariff. What is a reasonable tariff? President McKinley has defined it by giving Lincoln's answer to the man who asked how long a man's legs should be. President Lincoln said long enough to reach from his body to the ground. So our tariff should be high enough to make up for the difference in wages paid here and abroad. It should be sufficient to protect American industry and American labor. It should, moreover, be just and equitable to all branches of industry. Irritating duties, unimportant from a revenue point of view, such as duties levied on scientific apparatus, and books for schools and colleges and libraries, and for all educational purposes, and on paintings, may with safety be avoided. There should be no discrimination. On that rock, I have shown the Wilson-Gorman tariff has gone to pieces. And, lastly, it must be framed from the foundation with a view to revenue necessities, and not founded on a theory which, as in the original Wilson bill, brought its framer face to face with a condition involving a two hundred million dollar deficit. It would seem that in the framing of the bill Mr. Dingley and his colleagues have followed along these lines, though perhaps not as closely as practicable. If the final results justify this conclusion, we may yet hope for a settlement of the tariff question, to be followed by a period of stability and business prosperity.

ROBERT P. PORTER.

RUSSIA'S PLANS AND PURPOSES.

BY W. F. MASON M'CARTY.

THE great empire of the Czar, European and Asiatic, little known to the outside world, and concerning which the people of the United States have but the faintest outlines of information, is a land of surpassing interest.

With an area of nearly eight and a half millions of square miles, or one-sixth of the land area of the world, and a population of 125 millions, it is, taken as a whole, less settled than our Western States were forty years ago. It is a country rich in soil, in mineral wealth, in forests, and so vast that no nation in history compares with it in natural resources; while, at the same time, because of the recent multiplication of appliances for developing a wilderness country, no past changes from wilderness conditions to civilization afford a standard for measuring the progress likely to be made in this colossal empire. The development of our own country west of the Alleghanies, during the past fifty years, gives a nearer indication as to Russian possibilities than anything in history. But even this falls short. Science and the arts, steam and the railroad, electricity, chemistry, metallurgy, have all made wonderful advances. As her development of Siberia and Central Asia proceeds, Russia will have such vast hordes of Asiatic labor and skill to draw on, and she has for a foundation so much larger a country than ours, that even our growth does not offer a parallel to the opening up of the new country of the Old World.

There is, too, much in the difference in governments to be taken into consideration. Our laws, and particularly our homestead and land grant laws, our protective tariff operating in a new country to ensure high prices for all the products of labor, with all of our people working, each with his might, to make a fortune, produced wonderful results. The forces that Russia can

bring to bear on her undeveloped territory are entirely different. Man for man, she cannot hope to parallel our results with the populations she must work with. But she has some compensating advantages. She has an unlimited command of very cheap and very efficient labor. Nor will she lack, once her development is under way, help from the countries of Europe who contributed so largely to our population in the days when our heavy foundation work was being done. The Russian government can control, systematize, and concentrate this labor upon truer lines, not letting it scatter out and dilute its strength over too vast an area. Above all, Russia, or the Russian government, is a working machine, very different from any other in the world. There are no elections to disturb it, no congresses or parliaments, no administrations or ministries to be formed and reformed at frequent intervals, or called to account by public opinion or a public press. The government works upon plans not fixed or limited to two or four or seven years, but it works on to do its part day by day, having all the future to draw on.

The real government of Russia is the Council of State. It has no beginning, no end. Czars come and go. But the Council of State remains and works on. A member dies, or is displaced, but his place is filled. The plan is not changed. The policy is worked out just the same. The chart the Council of State works by has for its foundation the will of Peter the Great, modified by the changes of time and circumstances. The Czar is the visible autocrat, the Council of State the real one. The Czar is the head of the State and of the Greek Church, those two powers which are in fact the government of Russia. The Council of State and the Greek Church work by rule. The development of Russia, or of Russian plans, domestic or foreign, is never hurried. It moves fast or slow, according to its power and the advantages or obstructions of the time. But Russian development always progresses. During the past decade Russia has made more progress than ever before in a like period, more, indeed, than any other nation has ever made in a decade.

Ten years ago Russia had a secret treaty with Germany—a sort of half-way treaty not known to Germany's associates in the Dreibund. She had also good relations with France because Russia had blocked Germany's contemplated attack on France in 1875. But the real ruling power was Great Britain. Holding

the Dreibund up to keep Russia and France isolated, with Russia and France keeping Germany, Austria, and Italy anxious in turn, England proceeded with her Egyptian policy, held up Turkey as a cork in the neck of the Black Sea bottle, and went on with her Indian and China trade and her African expansion. To-day, Russia really controls Turkey, has a good understanding with Germany and Austria, has upset Italy in Abyssinia, has made the Dreibund a rope of sand, has France for an offensive and defensive ally, and has England isolated. To-day, ostentatiously demanding peace between Greece and Turkey, she is trying to force England to take the Grecian side in order, first, that she may take possession of Turkey to Egyptianize it after the English manner, though ostensibly coming in as Turkey's protector. And she is manœuvering so that, while she and her Continental associates are demanding peace, England may make war by taking sides with Greece. Russia is ready for war and desires it, because she desires Turkey and Constantinople. But she desires and is trying to so manage that England may bring on the war. The whole Grecian hubbub is a fight for position. England may go in. She is stronger now than she will be later, and her fleets might make havoc with European navies. But on land she could do nothing. The closing of the mints in India has impoverished Great Britain's Asiatic Empire, and famine and plague have been added to poverty. Russia is pushing her advantage while it holds.

We hear in America much about Nihilism in Russia. And the general idea concerning the power and character of Nihilism is erroneous. We had in America, after our civil war, an organization remarkably similar to Nihilism in Russia, and singularly sprung from a like cause, the Ku Klux Klan. The Ku Klux was an organization of men who had lost their slaves, and were fighting the former slave because he had the elective franchise, and under unscrupulous leadership was abusing it.

Nihilism is the Ku Klux of Russia. It sprang from the liberation of the serfs. Nobles who were impoverished by the great change in labor, and by losing control of labor, started the Nihilistic organization and formed its innumerable circles. This force was joined by all the anarchistic forces of Europe, so far as co-operation was possible. Nihilism thought itself strong enough to seize the government of Russia through killing the Czar. It

did manage to kill one Czar. But it never was strong enough to do anything but fight a losing fight against the government. The government always had better men, and abler men, and more of them, to fight Nihilism than Nihilism ever had to fight the government. Nihilism is now, and for many years has been, recruited from the ne'er-do-well sons of Russian families, who cultivate the grievances of a former generation, and from students and young men easily led into excitement and lawbreaking. But the power of the organization is fast dying out as the causes which started it pass into the background. The Russian government was never so strong in the affections of the Russian people as to-day. In case of war not one-half of one per cent. of the population could be mustered against the government.

With the possibility of a general war in Europe, the plans and purposes of Russia are of absorbing interest. Greece would not have gone so far as she has without a purpose of going still further, nor would she have taken a position from which retreat would be difficult, if not impossible, without an understanding with Russia or such knowledge of the situation as would assure her immunity from the intervention of others in the quarrel. Blind as the Grecian movement looks, it has not been blindly made. While all the Powers, apparently in concert, are demanding peace, those who are behind the scenes know that there is no real concert, that the war for which all the great Powers have so long been preparing is close at hand, and that the gathering storm may break almost immediately.

Peter the Great, more than any ruler of his day, indeed, more than any ruler of any day, realized that the world was changing over to a time when the developments of peace would throw out the combinations of war. He was a mechanic as well as a king, because he saw that the day of work, of production, was to supersede the day of robbery and destruction. The bottom idea of all the views he entertained, of all he left to guide Russia, was the development of Russia into a great commercial and industrial nation. That idea has governed all the workings of the Council of State.

The tradition which makes Constantinople the future capital of Russia grew out of the idea of making that city the great commercial city of the world. To recover it from the Moslem has been the sentimental part. To make it the great mart of the

world has been the real objective point of the Russian government since the time of Peter the Great, though this has been kept in the background. But plans were laid out, with this in view, at the close of the Napoleonic wars, and have been steadily adhered to from that day. For a quarter of a century past, efforts have been concentrated to so shaping events that a situation such as exists to-day would grow up. Russia is ready in all ways to carry out her plans, and if the present situation precipitated by Greece results in a general war, as it must if war begins between Greece and Turkey, it will be found that Russia alone is working to a general plan and has forces and means to carry it out.

Contrary to general opinion, the Russian Council of State is the most highly organized, trained, and systematic governmental machine in the world. It is strong in scientific knowledge, and has at command the most expert help in all the arts that science has of late years developed. Russia's financial organization and power, wholly unknown to the outside world, is perhaps stronger even than her military organization. Since the Franco-Prussian war Russia has been preparing to secure her base of commerce—Constantinople. A summary of her great works of recent years will show that they all point to the Capital of the Turk.

The Trans-Siberian Railroad, while ostensibly built, as our first Pacific road was built, to fasten to the Empire her Pacific Coast, has underlying its construction a commercial plan infinitely more important: to open up new country and connect it with the overpopulated countries of Eastern Asia, China, Japan, Corea, from whom can be got both trade and population to develop Siberia, and, further along, to create a new overland traffic between the immense populations of Eastern Asia and Western Europe, that shall replace the present route *via* Suez or the Cape. The trans-Caucasian development had the same purpose in view, with Central Asia and Northern India as the countries to draw from.

Constantinople is the key of the whole plan. No site in the Eastern Hemisphere has such advantages, military and commercial, as the city of the Bosphorus. Held by a power as strong as Russia, the combined fleets and armies of Europe could not take it. The Balkans guard it by land, the straits by water. Commercially it is the gateway of the three continents. It is the western terminal of Russia's great trans-continental line, and to it

come naturally the branch lines from Central Asia *via* the Caspian and Black Seas.

Russia has appreciated fully her advantages. She has known that when the time came for her to open her pack and display her wares she could out-trade England, and bring to her support the countries of Continental Europe, because she had something to give to each. Her plan involves for all the nations of Europe, Africa, or Asia touching upon the Mediterranean a share in the wealth to come from restoring to that inland sea the wealth and glory of trade it had in ancient times, more complex and greater in magnitude in the degree in which international trade has developed and the arts have grown in power and variety of production.

For the great nation of Northern Europe, which lies on her western border—Germany—Russia has something to offer too great and valuable to be refused. What this is can best be appreciated by a home illustration. Our people are familiar with the wealth that has accrued to our New England and Eastern States through the development of the Western States and territories in the past fifty years. Yet the field of development that Russia offers is infinitely larger—large enough to employ the capital, the mines, furnaces and factories of Germany and of France to their fullest extent. The world Russia has to open up affords greater scope than even the Western Hemisphere offered when found. Our Western World was developed from Europe alone. Into the great Russian wilderness will pour the surplus labor, skill, capital, organization of Europe and Asia combined. Even the United States will largely participate in the way of supplying machinery.

Russia is on the threshold of opening up this new world. It is hers. It is fast in her control. No one can take it from her. Once the Russian hand is shown, can Europe, covered with a blight of hard times and low prices, afford to stand in the way of enjoying the benefits of the new field because Russia desires and needs, as a commercial base, a city on the Bosphorus now held by the Turk and wholly useless to Europe? Is Germany, seeking the world for markets, going to pass by the new and great one Russia can offer? Is France, with her front on the Mediterranean and her interests on the African side, going to oppose the revival of wealth and trade in that inland sea? Is Austria, even, going to

oppose it? What has she to gain? What has Italy to gain by opposing it? Nothing. By helping it? Everything.

While Russia has kept up and cultivated good relations with her European neighbors, she has by no means failed to take advantage of what has occurred in the Far East. The Japanese-Chinese war offered her an opportunity to secure advantages for herself and to check the dominant British interests, which she has in no way neglected. Her relations with Japan are good. Corea she looks to as the future site of cotton manufacturing, with advantages superior to any that England has. In China Russia has secured almost everything she needs, and she has an invitation to ask for anything further she may require.

All that is now needed for the accomplishment of Russia's great plans is her commercial base—Constantinople. The trans-Siberian railway will soon be open. The lines toward Northern India can be pushed. Demand can be created for enormous supplies of manufactures from Germany and France. Greece has started the game; Russia coming to Turkey to protect it, can Egyptianize Asia Minor after the English plan in Egypt. She will not have begun the war, but will have taken advantage of it. Behind the Grecian hand may be Russia's, though the Russian voice is for peace. There may be another point in Greece's lead. The country to which Russia has least to offer is Austria. All that has permitted Turkey in Europe to stand has been the question of a division of her territory and a possible reorganization of the Balkan States that have from time to time broken off from Turkey. Russia would be glad to have Greece get her share—old Grecian States—by advance claims. Better for Russia that as much as possible of the territory south of the Balkans should go to Greece rather than to Austria. Nor can Austria alone enforce any other result. Germany will not help her. The *Dreibund* has long been a rope of sand.

While Russia has done the loudest and most emphatic talking against the move that Greece has made, yet it may be to cover a design that falls so wholly to Russia's hand. Once the war comes new lines can be formed. Greece can hold her own, meantime; and with the war opened the apparent concert of the Powers will end. Russia will find the Grecian war torch as good as another, so it lights Russia's way to Constantinople.

W. F. MASON McCARTY.

CHEAP TRANSPORTATION IN THE UNITED STATES.

BY J. A. LATCHA, M. AM. SOC. C. E.

CHEAP transportation for the commerce of the world is one of the most important problems of the age. That nation which reduces to the lowest figure the cost of transferring the immense tonnage of modern commerce from point to point, whether for inland delivery or for foreign shipment, all other things being equal, will dominate the commercial world. The history of the United States for the past thirty years demonstrates the correctness of this statement. Our marvellous growth in population and wealth primarily was dependent upon the creation of our great railroad system. Should that system suddenly be removed from the face of the earth, calamity to the entire world would be so prompt and complete as to appall us in its contemplation. If these facts are conceded, it must be clear that a revival of profitable business in the United States, with accompanying prosperity, can alone be assured by improvements upon that railroad system which will enable us to transport our traffic at constantly diminishing cost. This ought to be self-evident, yet some of our most eminent engineers and able business men assert that the industrial and commercial prosperity of the United States absolutely demands the construction of ship canals in various portions of our country. The writer, many years ago, became convinced that the era of canals for general traffic purposes has long since passed. In arriving at that conclusion it was had in mind that, as usual in matters of importance, exceptions prove the rule. That the Suez Canal is a great and, to-day, a prosperous public thoroughfare none can deny. It must be remembered, however, that from the dawn of history the stream of commerce has trav-

ersed the territory wherein lies the Suez Canal. A pregnant question, however, is what would be the effect upon the use and value of that canal should Russia wrest India and other Asiatic dependencies of Great Britain from that Empire? The commerce of the Orient in that case certainly would not traverse that canal, but would be diverted largely by Russia through Siberia to Europe. Another exception is the Sault Ste. Marie Canal. As all know, that famous artificial waterway is practically less than a dozen miles long and connects about 500 miles of open waterway on Lake Superior with 1,000 miles of lake navigation to the St. Lawrence River. When, however, it is proposed to construct 350 miles of continuous ship canal through New York State, a vastly different proposition is before capitalists and commercial men.

It is not intended, however, at this time to consider in detail the ship canal problem. The needlessness of that, it is believed, will be made apparent by discussing the transportation question from another standpoint. It will be advisable, however, to note that the latest attempts at creating great ship canals for commercial purposes have been notorious failures, financially and commercially. The Manchester Canal and the Baltic Canal in Germany demonstrate this fact. The German government has established a scale of tolls for the use of the Baltic Canal for commercial purposes, varying from fifteen cents to twenty-five cents per ton, the average toll being about twenty cents. As the Baltic Canal is but sixty-one miles long, the average charge on that waterway for tolls alone is $3\frac{27}{100}$ mills per ton per mile. It is desired that this fact shall be kept clearly in mind by the reader. It must be evident, should a ship canal be built connecting New York City with Buffalo, it would cost enormously, and whether that canal be free or be operated on the basis of a toll, the interest charge on cost of that waterway must ultimately be paid by the people. Under the most favorable circumstances a ship canal through New York State cannot cost less than \$500,000,000, involving an interest charge of at least \$12,000,000 to \$15,000,000 annually, exclusive of all charges to be met by the people in opening and maintaining a deep water channel through Lake and River St. Clair, and also the enormous expenditures necessary to deepen and maintain channels and dockage at all the lake harbors.

While the tonnage traversing our great lakes is enormous, and there is no wish to underestimate its importance to our nation, none familiar with the facts will for a moment deny that to-day the commerce carried on our great railroad system vastly surpasses the water traffic in volume and value. None will deny that our waterways started in the race for development greatly in the lead, and if they have fallen behind in the struggle it must be due to the fact that transportation by rail is the method which does, and will increasingly meet modern necessities.

The writer believes transportation by railroad is the essential and only way for the people of the United States to meet the *modern commercial competition of the nations of the world*; he believes that traffic can be carried from Chicago to New York Harbor by railroad at less cost during twelve months of the year than it can be by the largest, most effective, and cheapest ship canal that ever can be built; he believes the commercial salvation of the people of the United States depends more largely upon the perfection of such a railroad thoroughfare than upon any other public measure; he believes such a thoroughfare can be created by the united efforts of the Trunk Line railroads, or if they will not act, that other measures can assure the construction of such a railroad. An attempt will be made to demonstrate the soundness of these views.

It is well known the competition of India, of Australia, of Argentina, and, especially of Russia, which, within the past three years, has been building railroads at a tremendous pace to deliver its wheat at seaports, is destroying our grain export business, which for a generation secured the gold with which to pay our trade balances. The loss of this business, in addition to the shrinkage of cereal values, has bankrupted many of our greatest railroads within the past six years, with resultant destruction, not only of more than \$500,000,000 of railroad values, but with even greater depreciation of private property dependent for its value on the prosperity of our great transportation system.

If we are to change the present commercial conditions in the United States, we must act immediately. We must perfect facilities enabling us to undersell all other agricultural nations in the markets of Europe. We can do this quickly and relatively for a trifling expense, by the improvement of our old east and

west railroads, thus enabling them to carry at a profit wheat, corn, and meats at such low cost that exports of grain and other agricultural products can be made at New York Harbor, thus controlling the food markets of the world and insuring the return imports of general merchandise from Europe to New York and thence to the far West. If we cannot do this and promptly, we will in a few years have further financial collapse regardless of what may be our currency or our tariff.

The prime requisites for accomplishing improvement in our industrial, commercial, and financial condition are, first, that traffic, and especially grain, must be carried by the shortest and most economical route possible from Chicago and St. Louis to New York City and thence to manufacturing Europe; second, that traffic must traverse the heart of the great manufacturing regions of Ohio and Pennsylvania, insuring the bread stuffs for our laborers in the iron and coal fields at the lowest cost possible, and must be carried upon the best and cheapest thoroughfare for the distribution East and West of the products of the coal and iron regions; third, the railroad of to-day must be built with continuously low grade and light curvature; fourth, coal for motive power must be secured at proper and suitable intervals along the line of such railroad. The importance of the fourth condition is not generally appreciated. This will be made clear later.

The Pennsylvania Railroad, main line, is operated at a total cost of about $3\frac{8}{10}\%$ mills per ton per mile*; the Philadelphia and Erie Division of the railroad is operated at a cost of about $3\frac{3}{10}\%$. It is especially desired it be noted that this cost is practically the same as the charge for tolls alone (viz., $3\frac{2}{10}\%$ mills) on the great German Canal. The main line of the Pennsylvania Railroad has a grade of 83 feet per mile crossing the mountains westward, and a grade of $52\frac{8}{10}$ feet per mile eastbound. That railroad also has ten-degree curvature on its main line. It has fuel on or near its main line from Pittsburg to Altoona, but from Altoona to New York it must haul its fuel long distances for its motive power. The Philadelphia & Erie Railroad has light grades from Sunbury to near Driftwood; thence for 168 miles to Erie it continuously crosses heavy divides involving a succession

* The figures throughout this article represent cost per ton per mile, unless otherwise indicated.

of grades varying from $52\frac{8}{10}$ to 70 feet per mile both east and west. From Emporium to Erie, coal for motive power is secured very near to or along the track. To this latter fact largely is due the economy of operation on that division of the Pennsylvania Railroad.

Upon the completion of the New York, Chicago & St. Louis Railway about fourteen years ago, it was found it was operated at a cost per ton per mile less than any other railroad in the world except the Pennsylvania Railroad. It was quite evident these results were largely due to the straight line and low grades secured on that railroad. That the importance of these physical characteristics may be appreciated, a description of the alignment and gradients will be given. From Buffalo to Dunkirk, a distance of about 42 miles, the gradients are $52\frac{8}{10}$ feet per mile both east and west. From Dunkirk to Fort Wayne, a distance of about 329 miles, the gradients are 21 feet per mile eastbound and 31 feet westbound. These grades are maintained through the cities of Erie, Cleveland, and Fort Wayne. The gradients on the splendid property of the Pittsburg, Fort Wayne & Chicago Railway west of Fort Wayne, a distance of about 150 miles, were 35 feet eastbound and 45 feet westbound when the New York, Chicago & St. Louis Railway was built, hence the same gradients were adopted on the new railway west of Fort Wayne. The maximum curvature adopted on the N. Y. C. & St. L. Ry. was five degrees. The curvature from Buffalo to Chicago is five per cent. and from Dunkirk to Chicago it is only four per cent. There are several tangents over sixty miles long and several thirty miles in length.

The fuel for motive power on the New York, Chicago & St. Louis Railway is hauled from mines to point of consumption an average distance of about 200 miles. With these physical characteristics this road was operated for ten years for an average cost of about 4.15 mills, and to day is operated for about 4.10 mills. It is possible, for the sum of \$400,000 to cut down the gradients on that railway from Chicago to Fort Wayne to 21 feet per mile eastbound and to 31 feet westbound, which would largely reduce cost of operation on that portion of that railway.

It is well known that while the New York, Chicago & St. Louis Railway has complete organization of station facilities and service from Bellevue to Buffalo, yet it is restricted rigorously in

securing local freight and passenger business over two-thirds of its distance that it may not interfere with the local earning capacity of the Lake Shore Railway, which controls the former road. The necessity of giving these details will be apparent later.

Shortly after the completion of the New York, Chicago & St. Louis Railway, the Lake Shore Railway management learned of the advantages accruing from the continuously low grades of the former road, and began the systematic reduction of grades on the older road. Hundreds of thousands of dollars have been expended on the Lake Shore Railway cutting down grades from Chicago to Berea to $17\frac{5}{10}$ feet per mile eastbound, and 35 feet per mile westbound. From Berea to Cleveland the grades east are light, but are $52\frac{8}{10}$ feet per mile westbound. From Cleveland to Collingwood the grades are 35 feet per mile east and light between these points westbound. Within the past year (1896), the grades have been cut down from Collingwood to Buffalo from 35 feet to $17\frac{5}{10}$ feet per mile east, but remain at 35 feet per mile westbound.

Pay tonnage on our Trunk Lines is generally at the rate of three tons east to two tons west. The gradients, therefore, on the Lake Shore Railway are not, as yet, well balanced. The motive power which can haul loaded and empty cars west over 35-foot grades could haul the same number of loaded cars east over a 25-foot grade. To balance the $17\frac{5}{10}$ foot grades east, the westbound maximum should not exceed 25 feet per mile, instead of 35 feet, as on the Lake Shore Railway. These facts are noted because the Lake Shore Railway is the best-operated railroad in the world, perhaps, excepting alone the Pennsylvania Railroad.

It will be very difficult, if not impossible, ever to reduce the gradients for several miles east and west of Cleveland. The resulting excessive cost of operation through Cleveland on that admirably managed railway must always prove a serious detriment to that property.

The fuel for motive power on the Lake Shore Railway is procured from the same sources as by the N. Y. C. & St. L. Railway. With the physical characteristics just described, the Lake Shore Railway was operated for ten years at an average cost of $4\frac{3.0}{10.0}$ mills and is to-day operated for about $4\frac{1.0}{10.0}$ mills.

The importance of the careful analysis of the physical characteristics of the model Lake Shore Railway must be

apparent when methods for improving the operation of our railways are discussed.

The New York Central Railroad has relatively very light grades except through Albany, yet its fuel is necessarily hauled an average distance of about 250 miles, resulting in its cost of operation being about $5\frac{9}{10}\%$ mills. The Erie Railroad has light grades over much of its line, but it is seriously handicapped by the excessively heavy grades on its main line from Marion to Hornellsville, and also is compelled to haul its fuel great distances. These serious disadvantages cause the cost of operation on the Erie Railroad to be excessive, and many of the defects mentioned never can be remedied. The Baltimore & Ohio Railroad labors under even more serious disadvantages than any of the Trunk Lines, with resultant financial disasters to that great property.

The maximum grade from Chicago to Cleveland, to Akron, or to Massillon on any of the Trunk Lines need not exceed 20 feet east and 30 feet west. These grades could be secured for relatively trifling expenditures and would enable those railroads to transport low-priced commodities like grain at a cost much less than at present. To insure the best thoroughfare possible for cheap transportation by railroad from Chicago to New York City, a railroad should be perfected either from Cleveland, Akron, or Massillon to Tamanend via Wampum, Butler, Punxsutawney, Philipsburg, Lock Haven, Williamsport, and Rupert. That route should be perfected by the joint action of the Trunk Line Railroads and should be operated for the joint account of all those great companies. They should be vested by national legislation with just and equitable powers and rights to perfect and operate such a public thoroughfare, embracing among other essential reforms the legalizing of pooling of railroad traffic under the control of the Interstate Commerce Commission or other State agency. Such action is absolutely essential for the commercial and industrial welfare of the United States, owing to the bitter commercial competition of the nations of the world against America.

If such a railroad were perfected as suggested, its physical characteristics would be as follows: From Chicago to Massillon, 360 miles, the maximum grades would be 20 feet east and 30 feet west; from Massillon the grades would be 30 feet east and 40

feet west for 118 miles to Butler; from Butler to Milesburg, a distance of about 122 miles, the maximum grade east would be 45 feet and $52\frac{1}{2}\%$ feet west, thus crossing the mountains with grades much less both east and west than those on the main line of the Pennsylvania Railroad; the maximum grade east would be 35 feet and 45 feet west from Milesburg to Tamanend, a distance of about 120 miles. From Tamanend to New York the grades east would not exceed 35 feet and 45 feet west *via* either the Lehigh Valley Railroad or by the Central Railroad of New Jersey. Good connections also could be made to New York *via* the Lackawanna, the Reading and the Pennsylvania railroads.

Bituminous coal for fuel could be secured on the proposed railroad at Massillon, at Butler, at Punxsutawney, at Philipsburg, and near Snow Shoe, as well as at several intermediate points. That railroad would pass through the heart of the anthracite coal regions of Eastern Pennsylvania, insuring fuel for motive power on much more advantageous terms than does any existing Trunk Line railroad. A railroad could be perfected through the territory described, and of the characteristics named, which would not exceed 850 miles in length between Chicago and New York city, and which could be operated at a cost less per ton per mile than can any existing railroad in the world. A few details will demonstrate the correctness of this statement.

As has been stated, the New York, Chicago & St. Louis Railway is operated at a cost of $4\frac{1}{10}\%$ mills. Should a railroad be perfected from Chicago to Massillon with 20 feet grades east and 30 feet grades west, instead of 35 feet east and 45 feet west, as now exist on the New York, Chicago & St. Louis Railway west of Fort Wayne for 152 miles, and should that railroad be free to make every effort to secure all freight, both local and through, it possibly could, it certainly could be operated at a cost not exceeding $3\frac{5}{10}\%$ mills between Chicago and a point 100 miles west of Massillon, to which point coal for motive power could be hauled economically from the latter city. If the Philadelphia & Erie Railroad can be operated over grades existing on that line for $3\frac{3}{10}\%$ mills, the proposed railroad, with coal on its line at convenient points from Massillon to the Lehigh River, and with grades only 20 feet east from a point 100 miles west of Massillon and with grades only 30 feet east of Massillon to Butler

and with maximum grade of only 45 feet east across the mountains to Milesburg, and with maximum grade of only 35 feet east from Milesburg to New York city, must be operated for $2\frac{5}{10}\%$ mills, and the total average cost of operation would not exceed $2\frac{7}{10}\%$ mills.

For the purpose of demonstrating the soundness of these conclusions, it will be assumed that an entirely new railroad is built from Chicago to New York, a distance of 850 miles. All freight cars on a railroad as proposed should have a maximum capacity of 60,000 pounds. They should be equipped with safety couplers, air-brakes, etc. But while the cars should have a capacity of 60,000 pounds, the average pay load will be estimated at the extremely low figure of 15 tons per car. To insure the most systematic and economical results, the proposed railroad should be operated in three divisions of 120 miles each from Chicago to Massillon, a total distance of 360 miles. Over these divisions sixty loaded cars could be hauled with one engine and crew, the grades being 20 feet eastbound and 30 feet west. From Massillon to Butler, a distance of 118 miles, forty-five loaded cars could be hauled east by the standard engine over 30-foot grades. From Butler to Milesburg, 122 miles, two standard engines could haul sixty loaded cars with one train crew, the maximum grades being 45 feet east and $52\frac{8}{10}$ feet west. From Milesburg to New York, a distance of 250 miles, the line should be operated in two divisions, and a standard engine and one crew could haul forty loaded cars east over 35-foot grades. The average trainload, therefore, eastbound would be fifty-two loaded cars of fifteen tons pay load each, or a total load of 780 tons.

With the low grades arranged in divisions as described and with fuel over two-thirds the distance, the motive power department, with full trains moving continuously from Chicago to New York, unquestionably could be operated for not to exceed 12 cents per train mile. But the cost for motive power will be taken at the average cost of 14 cents per train mile. The motive power expenses on each through train, on the 850 miles, for engineers, firemen, oil, waste, repairs, etc., at 14 cents per train mile, and including the extra engine on the summit division, would be the sum of \$136. The railroad as described would be operated in seven divisions. Through express freight trains moving continuously night and day would average at least 20 miles per hour.

Each train would cost on each division for trainmen and for train supplies not to exceed \$15, or a total for the seven divisions, the sum of \$105 for the through run. With an average of 52 cars on each train the cost for repairs, renewals, and interest on cars, etc., would not exceed \$75 for each through train. The cost for maintenance of way and structures for each train of 52 cars would not exceed \$105. The cost for expenses of terminal and intermediate yards, etc., for each through train would not exceed \$100. The general expenses of all kinds, including train dispatching, would not exceed \$75 per train. The total average cost, therefore, for each through train of 52 cars loaded with grain from Chicago to New York would be as follows :

Motive Power Department.....		\$136
Conducting transportation {	Trainmen and train expenses.....	\$105
	Maintenance of cars and interest	75
	Yard and terminal expenses.....	100
		\$280
Maintenance of way and structures.....		105
General expense, including dispatching		75
		\$596
Total expenses for one through train of 52 cars....		\$596

This estimate is based, not on any local business, but exclusively on through tonnage. The expenses for local business would be covered by higher rates as explained later.

The average charge for carrying wheat on existing railroads from Chicago to New York City, for several years, has been about twelve cents per bushel. If a single-track railroad with ample passing tracks were completed through the territory named and upon the basis outlined, it could carry agricultural products from Chicago to New York Harbor at a cost not exceeding one and one-quarter mills, and at that charge, which would be practically three cents per bushel, we could undersell all other agricultural nations on earth. That a railroad as described could carry traffic on the basis named will be made clear by a few details deduced from the facts just stated. If a train, averaging 52 cars, each carrying fifteen tons of wheat, were hauled from Chicago to New York, and if the charge on that grain were one and one-quarter mills, the charge per car for the 850 miles would be \$15.94 and for the average train load of 52 cars the total charge would be \$828.88. The total cost of transportation for one through train of 52 cars would be \$596, and the net earnings on each through train loaded with grain would be \$232.88, or 28 per cent.

The merchandise tonnage, westbound, would average about two to three tons of food products eastbound. The train west, therefore, would average about thirty-four cars loaded with eighteen empty. If the rate west on low-priced tonnage were fixed at the charge of two and a half mills, that traffic would pay satisfactorily. The earnings on each loaded car at two and a half mills would be about \$30. On the thirty-four loaded cars the gross earnings would be \$1,020. The cost for transporting the fifty-two cars west, including the eighteen empty cars, would be somewhat less than the cost eastbound. The difference, however, will not be noted in the estimate, but the same cost for transportation, viz., \$596, will be adopted for the west haul. The gross earnings on thirty-four loaded cars west, as stated, would be \$1,020; operating expenses, \$596; net, \$424, or about 43 per cent. High-class goods, such as silks, wines, etc., should bear a charge, on through trains, of from six to eight mills. Local business should bear a charge of from three to four mills, and all classes of tonnage should be carried at an average charge of $2\frac{1}{10}$ mills, as heretofore stated. Such results would be assured on a short, low-grade railroad, with fuel distributed on its line, as herein described. It is in this direction we must seek such economy on our commerce as will enable us to survive as a nation against the competition of the world.

It is worse than useless to talk to-day of ship canals as factors in the struggle before us. The cost for carrying wheat from Chicago to New York *via* the Lakes, transferring from vessels to canal at Buffalo, thence by canal and Hudson River to New York, including interest, insurance, etc., varies from five to six cents per bushel. This cost, however, it is essential to note, does not include expenditures of the United States government, nor of the State of New York, for construction, repairs, and operation of canals and public works necessary for keeping open channels and harbors, and it is this latter fact which renders it needless to hope for any practical decrease in cost of transportation by ship canals. A few details will make this clear.

The most enthusiastic ship canal advocate cannot claim that wheat and corn can be carried from Chicago to New York by canal at an actual cost of less than two and a half cents per bushel, including insurance, etc. If a ship canal be built through New York State with a depth of twenty-five feet of water, all harbors

and channels on the Great Lakes must be provided with the same depth of water. The interest charge on the enormous expenditures necessary to open and maintain such a waterway and harbors would aggregate, in addition to actual cost of transportation, not less than two and a half cents per bushel on grain, and a *pro rata* charge on all other tonnage traversing that route. The actual cost, therefore, on each bushel of grain, including transportation and interest on governmental expenditures, would be five cents and that cost must be met by the nation whether directly by a toll or indirectly by the interest paid by the government, and the waterway would be open only nine months annually.

By joint action, existing Trunk Line railroads can perfect such a railroad thoroughfare as herein described at the trifling cost of \$7,000,000. If they will not do this an entirely new single-track railroad can be perfected from New York to Chicago for \$25,000,000, and that railroad can be completed in eighteen months. A ship canal cannot be built through New York State in less than five years and at a cost of \$500,000,000. In less than five years Russia can and will fatally cripple us commercially, for it must be apparent to those who observe the activity of that great power that our future commercial opponent is that Tartar Empire. We receive no profits whatever from Russia. The growth of that empire is directly in lines antagonistic to the United States. From the profits made from the products of our virgin soil, during the last twenty-five years, we accumulated capital which made resumption of specie payments possible, and enabled us to create our vast manufacturing plants. Russia is following the same policy that made us rich and powerful. British capital is crowding into Russia and Siberia, as it did for three decades past into the United States. The Cossack Giant is struggling for strength and growth, and will strangle us commercially if we do not awaken from our lethargy and face the danger threatening us.

We must make no mistake as to the actual industrial and financial situation in the United States. The decided shrinkage of values in this country began ten years ago, and has been precipitate during the past five years. The hard times and universal discontent caused the voters four years ago to rush to the Democratic party for relief. The result of that election was construed to mean that the people demanded Free Trade, when

actually what was demanded was better times. These did not ensue, and the pendulum swept with more terrific force to the Republican party, and we construed that to mean a demand for Protection. It is of vital importance we read the signs of the times aright.

We had a balance of trade in our favor at the close of 1896 greater than ever before in our history. Yet business prostration notoriously never has been more complete than during the year past, and is now almost as serious as at any previous time. Prices of all grain and farm products, except wheat, never have been less. A mercantile house with a million dollars capital at the opening of the year may do ten millions of business and at the close of the year its invoices may show a capital of \$900,000. That is precisely the situation of the United States. Our vast business with the world during 1896 was conducted at a loss. Had it not been for the misfortunes of all the wheat-producing nations of the earth, other than the United States, we would have financial wrecks from one end of the land to the other. Even as it is, bankruptcies are and have been appalling, and all financial and commercial interests are in most serious straits.

If wheat in Liverpool shall average the price governing during the two years prior to 1896, a permanent reduction of eight or nine cents per bushel on cost of transporting that cereal by railroad from Chicago to New York City would control the grain markets of Europe. At the average prices named, India, with the millions of British money spent on irrigating works for developing the wheat fields of that country and expended in building State railroads for transporting grain, cannot compete for the wheat market of Europe, except at a loss, in three-quarters of its grain-producing territory. Argentina lost money in 1895 on all wheat exported, except from areas having access to ocean navigation. Australia was in worse condition than Argentina. All know the people of the United States for several years have not made any profits on cereals, and should the price of wheat, which is now phenomenally high, owing to the crop failures throughout the world, suddenly crash to the price of a year ago, as it unquestionably will with good crops in all wheat-raising countries, the agrarian movement against railroads in the United States will startle the financial world. The so-called Granger War of a dozen

years ago covered only the trans-Mississippi regions. The storm centre of the coming war will be Michigan, radiating thence to all the Middle Western States, with the Populists and Iconoclasts of the far West the most savage destroyers of accumulated wealth. The shrinkage of values in America to the level of those of Europe is as inevitable and resistless as the movements of the tides. But with wise and timely action we can, in a great measure, meet and render harmless that shrinkage.

If we carry wheat at three cents per bushel from Chicago to New York, we can place 100,000,000 bushels in Europe in excess of what we do to-day. That grain would bring more than \$50,000,000 in gold to us annually. We could command the markets of Europe for meats, representing corn, oats, and forage consumed. These would bring us at least \$50,000,000 additional gold. Other agricultural products, such as cotton, etc., would earn us at least \$50,000,000 annually. If we make such reforms in cost of railroad transportation, as suggested, we can increase our exports of machinery and steel products to South America and other countries beyond belief, enabling us to take a commanding position as a commercial people among the empires of the world.

Instead of a ship canal from New York City to Buffalo, or any other like expedient, it must be manifest that our safety as a nation lies in improving our railroad system and especially must we have a low grade railroad from the far West to the Atlantic seaboard. Such a railroad would serve the great Northwest as no ship canal could. With such a thoroughfare in operation, steamers and barges could carry grain and other tonnage from Duluth to Cleveland, where modern appliances should be erected to transfer the traffic to elevators and warehouses. Railroads now in operation, or a new one, could make connection from Cleveland, with the low-grade railroad to New York City. Then would cheap transportation in connection with the Great Lakes be possible and at a nominal cost for construction.

The lowest cost of carrying grain from Duluth to Buffalo is about $1\frac{4}{10}\%$ cents per bushel. The average cost at Buffalo, with antiquated facilities for elevating, storing, and trimming grain transferred to canal-boats, is $1\frac{1}{10}\%$ cents per bushel. Modern appliances at Cleveland would insure the transfer of grain from vessels to cars for less than one cent per bushel, but that cost will be adopted for the purpose of comparison. The grain rate

from Duluth to Cleveland can be made $1\frac{3}{10}\%$ cents per bushel against $1\frac{4}{10}\%$ cents to Buffalo. Grain can be hauled from Cleveland to New York for two cents per bushel on the railroad described, as against three cents from Chicago to New York. The total cost per bushel for transportation, transferring, etc., from Duluth via Cleveland to New York would be $4\frac{3}{10}\%$ cents. No ship canal can carry traffic between these points for that sum. Indeed, it would be much more, including actual cost of transportation and *pro rata* of government expenditures, for opening and maintaining a waterway as herein explained. The route proposed *via* Cleveland would place Duluth and the Great Northwest directly in communication with the iron, coal, and coke business of Ohio and Pennsylvania, which would be of infinitely more value to that territory than would be any advantages accruing from the creation of any ship canal devised by the genius of man.

As the managers of our great railroad system had practical illustration of the tremendous results accruing from the perfection of such a low-grade railroad as herein described, they would make every effort systematically to reduce the grades on their main lines, thus reducing the cost of operation, with far-reaching and advantageous results to the commerce of the nation.

Two illustrations will be given of what could be done in this direction.

The great Southern Railway system reaches almost every portion of the South from Washington and Norfolk. That system has in all over 4,500 miles of railroad. Its main line from Washington to Birmingham is 800 miles long. That corporation represents over \$150,000,000 cash value of railroad property. The main line of that railroad is the aggregation of several railroads built at an early day, without regard to systematic adjustment of gradients or alignment. With the comparatively insignificant sum of \$4,000,000 the 800 miles of main line could be so improved by cutting down grades at various points that heavy trains could be hauled continuously over its entire length, insuring a reduction of at least twenty-five per cent. in operating expenses. There is not another great railroad system in this country where so small an outlay would result in such enormous savings in cost of operation, with accompanying prosperity alike to the entire cotton regions and to the Southern Railway Company.

The Central Pacific Railway is the key to the development of the vast Central West and of the Pacific slope. That railroad crosses the Sierra Nevada Mountains, theoretically with a 116-foot grade against the eastbound tonnage from California, but the grade actually for several miles is 125 feet per mile. East of the Sierras that railroad is physically in condition to be operated at remarkably low cost except for a short distance near the eastern terminus. That railroad represents an investment, National and private, including principal and interest, of over \$100,000,000. With an expenditure of only \$8,000,000 that railroad could cross the great Sierra barrier to commerce with a maximum grade of only 75 feet per mile, and also could greatly reduce the grades immediately west of Ogden. That expenditure of \$8,000,000 would radically reduce the cost of operation for trainmen, for motive power and for permanent way on that railroad. Other vitally important changes in administering that potent agency for serving the people should be instituted, which, in addition to the cutting down of the grades, would reduce the cost of operating the Central Pacific Railway fully thirty-three per cent. This statement is not lightly made. A year or more has been spent by the writer in California and in other far Western States studying this important problem, and it is certain these results can be assured on that railroad. The effects such improvements on the Central Pacific Railway would have on trans-continental commerce must be obvious to all. Not only California, Nevada, Utah, and other Western States would be rehabilitated financially, industrially, and commercially by action in the direction named, but, what does not appear to be understood and appreciated, not a section of the United States from Maine to the Gulf would fail to feel the tingle of reviving circulation through the arteries of trade.

It will require no argument to convince capitalists who had money invested in the great railroad system west of Chicago and St. Louis that had they, five years ago, perfected a railroad thoroughfare from Chicago to New York City, upon which grain could have been carried for three cents a bushel and other agricultural products at a *pro rata* cost, the \$500,000,000 of capital wiped out by reorganizations of bankrupt roads could have been saved from destruction. The Trunk Line Railroads, by united action, could have done that five years ago for an ex-

penditure of \$7,000,000. They can to-day, for that sum, prevent the further shrinkage, within five or six years, not only of railroad but of all values, which will amount to more than \$1,000,000,000 unless immediate action be taken in the direction suggested. Shall we have the foresight to see what is impending, or must we learn by lapse of time that values are shrinking throughout the world and the destruction of accrued wealth sweeping over the earth can only be averted in America by improved appliances for carrying commerce?

From what is herein presented for consideration, the conclusion must be irresistible that the phenomenal growth of the United States in population and wealth has been made possible solely by the creation of our great railroad system, and especially is this true of the empire west of the Mississippi River. Without that railroad system our 70,000,000 of people would not exist. Without that system in healthful and vigorous activity we will cease to be a prosperous, powerful, and contented people.

The nations of the world—Christian and Pagan—are ceaseless in effort to secure supremacy in commerce, wealth, and power. It is time we devote our energies to enlightened effort to develop and strengthen the railroad arteries of our country. Thus can we best defend our common interests against the commercial aggressions of Europe and of Asia.

J. A. LATCHA.

THE MODERN GREEK AS A FIGHTING MAN.

BY PROF. BENJAMIN IDE WHEELER, OF CORNELL UNIVERSITY.

No motive appeals more strongly to the modern Greek than the desire to be worthy of those he believes to be his ancestors. He is morally convinced that he is lineally descended from the men who made the Greece of old the mother land of art, eloquence, letters, civics, philosophic thought, and human liberty. With intellectual conviction on the subject he refuses to deal. For him to engage in argument about it would be a form of treason; for an alien it would be little less than insult. His conviction has passed into the realms of faith. He no longer walks by sight nor gropes by the tallow-dips of history or ethnology.

All the traditions of a glorious past are moulded into the fabric of his little state. He believes that the re-establishment of Greece as a nation is due to the fact that Old Greece vindicated for itself a right to exist. The *raison d'être* of the new state is found in fulfilling the virtues of the old. His impatient disgust at the "Erasmian pronunciation," and his insistence that ancient Greek should be pronounced like modern is based not on practical or philological, but on political considerations. The new life and its language, as well as the new state, is a reëmbodiment of the old.

The bravery of the heroes of Marathon is appealed to as a military ideal, the dignity of the old orators is made a perpetual rebuke to the politicians, Corinna and Sappho are utilized to decoy the university student into love for co-education, and the Marathon runner must win to show that the Greeks of to-day can do the old things in the old way. All these are to them more than mere nobilities of the historic page; they constitute a valid, real, and vividly present *noblesse oblige*.

It is not easy to overestimate the influence which their devotion

to everything linking them to their greater past may exercise over them. Among all these ties their Church is the institution most immediately and demonstrably involved. All through the dark centuries when there was no Greece, the Church maintained its existence as the sole witness, as the sole institutional embodiment of Greek nationality. It was the Church that raised the standard of revolt against Turkey, and it was around her that the elements of the new nationality were gathered and united. Hence the Church is of one substance with the State. Disloyalty to her is treason to the State. Religiosity does not abound, but patriotism does, and hence the Greek is stubbornly loyal to the Church, though her teachings are practically of slight importance to him. I once heard a prominent Greek declaiming against Christianity and its doctrines, an alien cult which had come in to displace the beautiful religion of his forefathers; but in the next breath he declared he would give his life for the Greek Church. "That is another thing; that is our nationality."

All the results, therefore, which could be expected to flow from the consciousness of sonship and inheritance, so far as the Greek's own belief is concerned, are abundantly present. Is he really in flesh and blood an heir? There can be no doubt that the present population of Greece represents a mixture of blood. In some of the mountain districts and in some of the towns pure Greek blood undoubtedly still exists, but extensive incursions of Slavs, particularly in the eighth century, established a considerable Slavic population in the central plains of the Peloponnesus, and the fourteenth and eighteenth centuries brought in large bodies of Albanians. These latter have not yet been entirely assimilated in language or type. The Greek blood, Greek usages, and the Greek habit of mind, like the Greek tongue, have, however, entirely predominated. There has been an ample refreshing of the blood, but the resultant remains substantially Greek. Late comers, as the Albanians were, they still came early enough to share, and nobly share, the revolution with the rest, and prejudice of race is lost in common participation in the work of founding the state. The Greeks of to-day are in every sense far more completely Greek than the Americans of the United States are English.

In raising a query concerning the probable fighting qualities

of the modern Greeks, every one must have in mind the reputed prowess of their ancient namesakes. Can they match that? Can they approach it? After what has been said, it is reasonable to expect that they will be ambitious to try. Indeed, if one estimated correctly the military qualities of the old Greeks, and carefully considered all the facts of their quite variegated military record, he would not probably go far astray in using his conclusions as a basis of calculation for what the modern Greeks are likely to do, especially if he did not correct too much for difference of time and conditions. The ancient Greeks were by no means all fond of war or good fighting men. The Spartans were rugged fighters, and susceptible of superior discipline. The stolid, realistic Bœotians, "the Dutchmen of Greece," fitted well into Epaminondas' solid phalanxes. The Arcadians and Achæans were famous professionals, and from the fourth century (B. C.) on furnished the largest contingent to the mercenary bands which constituted the best troops of various states, including Persia. But the Athenians among others greatly preferred to have their fighting done for them. After the fifth century one never hears of an Athenian army made up exclusively of Athenians. In the middle of the next century we hear Demosthenes modestly pleading for the employment in a certain expedition of citizen soldiery in the proportion of one to four. And even these were to go in order to "watch the officers." War was getting to be beneath the dignity of these city-bred men of culture, or else it was too disturbing an intrusion upon the larger interests of commercial life. Urban life and mercantile interests played havoc with the old romantics of war-making. It was willingly left to the unsophisticated mountaineers and country-folk, who still retained a *penchant* for the traditional sport.

War was always among the Greeks themselves essentially a form of sport. It was what is called a rough game, and involved some element of personal danger, but after all only enough to make it interesting. It generally involved an agreeable summer excursion into an adjoining country, with the attendant delights of picnicking and roughing it, and the thrilling chance of winning or losing. One army never sought to exterminate another, and rarely was a defeated army pursued for any considerable distance. A battle was a game which by well-established rules was

recognized as won when the opponent sought the privilege of burying his dead.

The average man among the modern Greeks is a veritable child in his fondness for sport, for adventure, for everything which involves hazard and chance. For solid monotonous plodding work he has little sense. The carrying out in orderly, mechanical fashion of a systematically devised plan which shall have its regularly assigned stints of labor, and shall bring with machine-like exactness its slow but certain results, affords him little delight. He has marvellously little mechanical sense or taste, and does not wish to be a machine himself or part of a machine. Among the peoples of Europe he has least in common with the German.

If he engages in a mercantile pursuit, he persists in making it a game. If he is a shopkeeper he cannot tolerate the one-price system. That is entirely too monotonous and prosaic a method of procedure, quite unworthy the interest of a man who has the sport instinct of a gentleman. Any ordinary person can conduct a business which consists merely in reporting the price written on a tag, and making change. The consummation of every trade involves a duel of wits, a certain amount of conversation, and a decided element of uncertainty as to the issue. All this is lost if the price is "marked in plain figures." There is no fun in it. It is the difference between going in a rowboat and a sailboat.

If you take time enough, and argue well, you may often induce a Greek to sell for really less than he ought to, but he will bear no grudge against you for it. As his good cheer will show the next time you visit his shop, he admires you all the more, for he is convinced you play the game well. If you paid his price, he would quietly despise you.

As long as war presents some reasonable element of sport, a chance of winning, fair opportunity for exercise of the wits, features of surprise and of shifting interest, the Greek will stay by and be an admirable soldier, but any application of the one-price system—the mechanical routine of drill, the monotonous life of the camp, the mechanism of march and retreat—will set his war-fervor sorely to the test. He wants movement, *élan*, a chance for the exercise of his wits, an opportunity for a throw of dice.

Let the Turkish army undertake to enter Thessaly through the devious passes, then the best talents of the Greek soldier will show themselves. Scattered over the craggy mountain sides, where each man can play his own game, they will prove like the Klephtic soldiery of the Revolution, famous guerrillas, and peers of the "embattled farmers."

Aversion to mechanical discipline shows itself in the drill of the Greek troops, as would be naturally expected from all that we know of them outside the army. As a people they always create the impression of disorderliness. Men who walk together on the street do not keep step. A Greek funeral procession presents to our eyes a most disorderly and individualistic appearance. The people who compose it go on foot, and each one seems to be strolling along on his own account. On arriving at the grave there is likely to be no fixed order of procedure. If there is, people do not conform to it. Everyone does what seems to him good. Absence of previous plan and of sense for order are apparent on every hand. If there occur a halt in the proceedings, through any uncertainty or lack of preparation, a debate may ensue. Three out of four of the bearers will prove to be orators. There is no one person in authority. Five or six different ones are giving orders or making suggestions at the same time. The same popular trait shows itself wherever masses of people are assembled. Any single man is a potential marshal and master of ceremonies and may develop into such without warning. All this represents a deep-seated national characteristic and one that renders the application of strict military discipline in the form known to the armies of the north extremely difficult.

Herein lies the chief ground for apprehension regarding the fitness of the Greek to meet the demands of modern methods of warfare. A German battalion is a firmly compacted machine in which the individual has lost the sense of autonomy. Panic cannot resolve it into its constituent elements, because steady discipline and persistent drill have made machine action a second nature. In the moment of emergency a Greek battalion is liable to become *ex uno plures*.

The discipline of the army has, in recent years, steadily improved. It is coming to be a regular institution. Up to 1892 it was steadily increased. In 1877 the regular army numbered

12,500; in 1892, 28,000. After that, owing to the financial difficulties, it declined to about 22,000. The discipline and *morale* of the officers, as well as the public order, has been in the last years greatly benefited by the establishment of the military police system, which places all the police bureaus of the country in the hands of officers of the regular army.

The impulsiveness and excitability of the Greeks finds a fortunate balance-wheel in the coolness and caution which characterize the King and his family. They have often been severely criticised by their people as indifferent, sluggish, as lacking in enthusiasm and ambition, and even in interest for the country and its well-being. They are Northmen. These warm-blooded, emotional men of the South cannot understand the stoical manner in which the Northman is wont to enwrap his firmest resolution and deepest feeling. The King is a man of keen sagacity, and calmly practical. He has been wise enough, recognizing the temper of his people and their inherited envy of obtrusive greatness, to keep himself much in the background, and to allow others to carry out his ideas. But the King governs, and it is good fortune for the country just now that he does. The Crown Prince particularly, by his quietness and even diffidence of demeanor, his conservatism of judgment, his firmness and orderliness in execution, stands in marked contrast to those he is now called upon to command.

It was an old saying of the other Greeks that the Athenian rowed well when coming into the harbor,—*Ἀττικὸς εἰς λιμένα*—a suggestion of “playing to the galleries,” as well as of aversion to drudgery, and it is likely that the modern Greek will on occasion show himself in this regard soundly Attic. The brilliant stroke which the “irregulars” of the National League have just made in crossing the frontier, seizing Baltino and menacing the line of connection between the Turkish positions in Janina and Ellassona, is thoroughly characteristic. It may prove a permanent success. The Turk has to deal certainly with an opponent far more alert and quick-witted than himself.

The Greek is no doubt lacking in adaptation to the finer tactical discipline, is impulsive, unduly excitable, distinguished by dash rather than good staying powers, and somewhat given to bluster and vanity, but no one who has read the story of the Greek revolution can deny him the right to be called a fighter,

and a brisk, brave, savage fighter. For seven years (1821-28) in the feebleness of disorganization and poverty he maintained a persistent and finally successful struggle against his Turkish oppressor, then immeasurably stronger than to-day, provided with a relatively strong navy, and entrenched in the original possession of the land.

When he faces the Turk, he faces his natural, his hereditary, foe. It is the old warfare of the Greek against the barbarian. It is an antipathy grounded in antitheses of character, of usages, of history, and of religion. The blood of the massacres of Chios and Constantinople, three centuries of bitterest slavery, call for revenge. But more is involved than memories of wrongs, traditional hatred, or present antipathy. The wholesale massacres of the Armenians have been a fearful warning. This people, thanks to the Powers who held the murderer's clothes, is now well advanced toward extermination. The turn comes next to the Greeks, four millions of whom, twice the population of Greece proper, live on Turkish soil. It is the policy of the Turk hereafter to "be in the unity." He has found the recipe; it is to kill the dissenters. The uprising of the Greeks is not in the interest of territorial extensions. This little race, a remnant left among the nations, sore pressed, menaced with extermination, has risen to assert that last supreme right of men and of peoples—the right to exist.

What the issue of the war, if it comes, will be, no one can foresee, but that the Greek soldier will prove himself worthy of his name, I am assured. The cause is one to call out all his native alertness, craft, and bravery. The equipment and resources of his army may be meagre, judged by the standards of northern armies, but he is used to meagre things. "Greece and poverty," as an ancient writer said, "grew up together." The average Greek can subsist a month upon what an Englishman would require for a week. Privation, exposure, marching, and climbing he can bear far better than the ordinary European soldier. But, best of all, his heart is in his cause, and patriotism such as these Greeks have we know little about.

The Turk proved himself in the Turko-Russian war a stubborn fighter. His ignorance includes ignorance of danger, and his fatalism makes him a stolid wall in defence. The Turkish army has had the advantage of drill and organization under Ger-

man officers, and in numbers and equipment is as a war-machine far superior undoubtedly to the Greek. On the sea the Greeks are relatively better equipped. They have three nearly new armored ships of about 5,000 tons each, and two others of about 2,000 tons, besides some twenty unarmored vessels, and forty excellent torpedo-boats.

In the result of the war much will depend upon the action of the Greek populations in Epirus and Macedonia. Should they rise in revolt, when war is declared, the Turks will find themselves in the midst of the enemy, menaced at front and rear. Peculiarly serious would be their position in Epirus, which, except for the sea route around the Peloponnesus, has no connection with the rest of Turkey except through the passes of the Pindus, and that route is already threatened by the "irregulars."

Should the Turks undertake to invade Greece they will find the mountains hard to pass, and even once in Thessaly, they will find Greece, as some one has expressed it, "a land built in water-tight compartments." Admission to every plain will have to be purchased at a mountain pass, and purchased at a high price.

BENJ. IDE WHEELER.

SECRET SOCIETIES IN AMERICA.

BY W. S. HARWOOD.

THE membership of the secret fraternal orders of the United States in the month of December, 1896, was, in round numbers, 5,400,000. Taking the adult male population of the nation at the present time to be nineteen millions, and allowing that some men belong to more than one order, it will be seen that, broadly speaking, every fifth, or possibly every eighth, man you meet is identified with some fraternal organization, for the preservation of whose secrets he has given a solemn oath, a pledge more binding in its nature than perhaps any other known among men. In this vast number have not been included the many thousands who are members of the various labor organizations, though they, to a greater or lesser extent, are knit together by secret threads; nor about 500,000 members of the secret military orders, as the G. A. R.; nor has any account been taken of the many other thousands who are identified with the fraternities of the colleges.

Perhaps even more significant than the fact that there are so many millions of oath-bound men in the United States is the further fact that auxiliary to and a part of these orders are military branches, having at the present time about two hundred and fifty thousand members in the prime of life, who are trained in military tactics and who know the sword and musket manual as well as does the cleverest "regular," many of them thoroughly informed as to the history, the present needs, and the possibilities of military life.

Some of these organizations are of quite recent date. Indeed, since the closing of the War of the Rebellion there has been a remarkable increase in their number in this country. And in the last two decades, especially, there has been a strong growth. The beneficiary nature of some of the orders, combined with the

secret work and the fraternal element, has no doubt attracted many men to seek entrance.

It is far beyond reasonable computation to attempt to indicate the amount of money given by these fraternal orders in a single year in aid of their members. Many of the benefactions do not come into consideration in the making up of reports, and many are the result of purely fraternal generosity. Some idea, perhaps, may be gleaned from the formally announced amount which is given every year in benefits of one kind and another—money paid for caring for the sick, burying the dead, supporting the widows and orphans of deceased members, and in sums paid out to the widows of deceased members in the form of insurance.

These amounts range in size from ten to twenty thousands of dollars per annum, to seven million five hundred thousand for a single organization. Many of the organizations pay out over a million dollars per year in this way. While it is difficult to arrive at positive figures as to the amount which has been paid out by the fraternal orders in the United States since their establishment, yet, allowing for the amount paid out in the year 1896 and not included in the annual reports of the grand secretaries of the various bodies, the enormous total of \$475,000,000 has been given by these organizations in beneficences. It should be stated, also, that this is exclusive of the three larger orders, the Masonic, the Odd Fellows, and the Knights of Pythias. As nearly as can be computed these three orders have paid out in the same line one hundred and seventy-six millions more, making all told the vast sum of nearly six hundred and fifty millions of dollars.

A tabular statement follows, but it should be clearly understood that the amount of money recorded as paid out in benevolences by the various orders does not include the private monetary gifts of the members. Did it include these private beneficences the sum must be immensely augmented. It is impossible to ascertain the amount which is given in this personal manner, for the significant reason that it is all given for the aid of those who would scorn such aid were the fact made public that they were to be made the recipients of it. In the period between the years 1892-93, and the close of the year 1896, many men holding responsible positions were compelled to relinquish these positions because of the prevailing hard times, and during this period thousands, indeed, tens of thousands, of dollars have

been given by fellow-craftsmen to such of these unfortunates as were members of secret orders. It was not money given in charity, it was not a premium on mendicancy ; it was not alms : it was the visible token of the greatheartedness which is one of the vital elements in fraternal life.

Take, for instance, one body, the Masonic, which may be considered typical of all. In connection with each lodge there is a relief committee whose duties are done with delicacy, whose acts are performed in tender and sympathetic secrecy. These committees ascertain the needs of those members who are facing hard fortune, aid them with money, with clothing, with provisions ; or, if possible, secure positions for future bread-winning. No record is kept in any form for the public eye of these private beneficences. Indeed, in some cases, not even the names of the members of the committee itself are known to the other members of the lodge to which they belong.

So in all these orders there are like acts. The sum which the members of the fraternal orders give to such of their members as are in need would amount to several millions of dollars per year, were only one dollar *per capita* given ; it is undoubtedly largely in excess of such an amount. There are large and well-equipped homes for orphans of deceased members, too, and for aged and indigent members, for which many thousands of dollars are expended annually.

The figures hereinafter given were secured by the writer in the month of December, 1896. In some instances the general secretaries of the organizations—from whom, in the main, the *data* were secured—estimated the membership and the revenue for several months past, dating from the annual meeting of the orders held in the summer or spring of 1896. The close contact of these officers with the subordinate lodges, the frequency of reports from the lodges and the intimate relationship between the general secretaries and the subordinate lodges give the general officers unusual avenues of information and make the figures practically complete to the month of January, 1897. It should be stated that, as there is no general grand lodge of the Masonic order, and as no reports are made from the lodges to any superior body, the amount of money contributed in public beneficences by this order has been in some measure estimated from the best general information obtainable.

Here is the table itself :

Name of order.	Membership.	Amount paid in beneficences.
Masonic	750,000	\$90,000,000
Odd Fellows	810,000	74,600,000
Knights of Pythias	475,000	10,362,000
Ancient Order United Workmen	361,301	71,729,180
Royal Arcanum	189,161	38,206,422
Modern Woodmen of America	204,332	7,299,985
Knights and Ladies of Honor	85,000	12,000,000
United American Mechanics	56,000	3,000,000
Catholic Knights of America	26,000	7,007,133
Order United Friends	15,000	4,931,700
Benevolent Protective Order Elks	52,500	500,000
Equitable Aid Union	16,610	7,742,748
United Order Pilgrim Fathers	22,000	2,321,030
National Provident Union	6,300	1,293,450
Improved Order Red Men	165,000	14,200,000
Ancient Order Foresters	36,825	80,000,000
Royal Templars	16,800	4,573,025
Tribe of Ben Hur	11,294	49,250
Catholic Benevolent Union	45,250	7,031,481
Knights of the Maccabees	244,704	7,233,930
American Legion of Honor	52,100	33,672,676
Order Scottish Clans	4,000	575,600
National Union	47,791	7,539,948
Knights of the Golden Eagle	60,000	1,811,186
Ancient Order of Hibernians	98,000	*691,928
Order B'rith Abraham	11,785	1,121,500
Improved Order Heptasophs	31,118	2,114,000
B'nai B'rith, Improved	2,700	132,550
B'nai B'rith, Independent	34,925	43,175,000
Catholic Mutual Benefit Association	41,800	6,600,000
Order Chosen Friends	29,413	11,617,000
Ancient Order Druids	16,500	3,806,697
Foresters of America	140,575	4,795,291
Independent Order Foresters	110,000	4,070,000
Order Golden Chain	11,550	2,228,231
Royal Society Good Fellows	13,164	3,124,154
Home Circle	8,140	1,650,000
Independent Order Free Sons Israel	14,300	4,869,900
Irish Catholic Benevolent Union	16,500	2,750,000
Knights of Honor	118,287	62,009,200
Knights of Malta	17,600	
Fraternal Mystic Circle	11,423	952,091
Knights of St. John and Malta	5,350	237,420
New England Order Protection	23,186	1,336,000
Independent Order Rechabites	3,520	
Woodmen of the World	76,962	1,370,107
United Order of Odd Fellows (colored) ..	130,330	†233,783
United American Mechanics, Junior Order	187,000	2,725,485
Order Sons of St. George	34,108	
Masonic (colored)	224,000	
Sons of Temperance	25,474	
Independent Order Good Templars	231,600	
	5,454,329	\$649,082,471

* For last two years only. † For one year only.

Of course the table does not include anything of the expenditures of the orders for room rent, for uniforms, for banquets, for regalia, for lodge-room furnishings. There are about seventy thousand lodges in the United States, and, allowing them an average of fifty dollars per month for lodge-room rent—a low estimate, as many of the orders have expensive suites of rooms in great city buildings costing thousands of dollars in rental per annum—allowing but fifty dollars per month as the average throughout the towns and cities of the country, it will be seen that there is spent annually the sum of forty-two millions of dollars for the bare rental of lodge-rooms. The furnishings and decorations of some of the lodges are rare and costly. Many splendid buildings have been erected for lodge uses primarily, and much money is invested by the orders in property of various kinds.

But while these secret orders are a vast power for good in giving aid and comfort to their members, in caring for the sick and ministering to the distressed in mind, body, and estate; while they give vast sums in beneficence and afford wide opportunity for developing the social side of their members, yet they are not an unmixed blessing to the race. The newspaper paragraphers have a sound basis in fact for their threadbare joke about the man who cannot find his latch-key hole when he reaches home after the lodge banquet.

This is not the place to discuss the temperance question or to dwell upon the evils of inebriety, but one should note in a consideration of the vast influence of these fraternal organizations the inimical possibilities of conviviality.

Yet another danger must be considered in estimating the influence of secret societies. One does not trifle with truth in saying that no human gauge can measure the sorrow that comes to some families through the too close attention of husband and father to the lodge-room. There is a strange and powerful attraction for some men in the mysticism of the ritual. There is a peculiar fascination in the unreality of the initiation, an allurements about fine "team" work, a charm of deep potency in the unrestricted, out-of-the-world atmosphere which surrounds the scenes where men are knit together by the closest ties, bound by the most solemn obligations to maintain secrecy as to the events which transpire within their walls.

In the business life of the land instances are not wanting where men have become so infatuated with their secret society work that they have sacrificed position and even financial standing that they might satisfy their craving for greater knowledge of the secret workings of many of the leading organizations. In the commonplace vernacular of the lodge devotees, these were "jiners"—men found in every community who are more eager to be initiated into some new order than to be strengthened in business standing. I think it will not be denied by any fair-minded and conservative member of these organizations that a very large number, throughout the whole United States, suffer in pocket, and not infrequently in business position, in gratifying their desire to belong to, and take all the degrees in, all the secret societies that appeal to their love for novelty and mystery.

There are many elevating and ennobling elements in these fraternities, but the broad, rich acres of man's selfishness are nowhere more carefully fertilized, tended, tilled, and reaped than in the lodge-room. It would all but revolutionize a large section of American Society if the wives and growing-up daughters of the households of the men who belong to these organizations should insist on their right to spend for their own adornment or their own personal pleasure dollar for dollar spent by husband or brother for dues and initiations, for regalia and uniforms and swords, for plumes and banners and banquets. In the great majority of cases the amount of money paid out for the actual expenses of the lodge, as the dues of the order, is not great; it is in the field of personal gratification that the vast unaccounted-for sum is expended. It is probable that, for mere personal gratification, aside from any real or imaginary benefits, the members of the various secret organizations in the United States will spend annually in banquets, railroad and travelling expenses, costly gifts to retiring officers, testimonials, elaborate uniforms, and rare swords not less than two hundred and fifty millions of dollars, and this is allowing but fifty dollars a year as an average for the delightful, but probably wholly unnecessary, expenses connected with the fraternities. It is quite likely the sum is considerably more than this.

But the importance of these fraternal organizations and their tremendous power for good must not be overlooked if we would arrive at a just appreciation of their significance. So numerous,

so powerful, have these orders become, that these closing years of the century might well be called the Golden Age of fraternity. So strong has their hold become upon so many millions of people that the occasions have not been infrequent where other ministers than the priests of the Church of Rome have inveighed against the lodge, and sought to show its pernicious activity in tearing down what the church would build up, or, to put it more mildly, they have protested against the usurping influence of the lodge, its tendency to induce men to accept it as their church, and to make its standards and forms and laws their guide of right conduct.

While the secret society has its peculiar dangers it has great elements of good. Its influence in making thoughtless men reverential, in increasing respect for government by law; its influence in maintaining and promoting allegiance to country, these are important elements of its service. While men with evil tendencies and deformed moral natures are known to be members of fraternal orders, and while, when so known, they are not always as promptly removed as might be wished, yet I think it is but fair to say that cases are exceedingly rare in reputable organizations where men of known badness are admitted. Indeed, one of the greatest powers of the secret fraternal orders of the present day is found in the element of selection. No other organization in the immediate hands of man, and unidentified with religion, so universally sets so high a standard of sobriety, integrity, and honesty; none other, when a seeker for admission appears, so sharply scrutinizes his past, so searchingly investigates his present. The prime essential in all secret organizations of this character is that the initiate shall be a manly man; after that a companionable man.

Nor should it be lost sight of that there is a demand upon these millions of oath-bound men in our land, whom we meet at every turn in the street, who touch elbows with us in business and in society, many of whom are leaders in the laity life of the church, and who are increasingly numerous in the ministerial ranks of the churches, it should not be forgotten that there is a most imperative demand upon the consciences of these men—the acknowledgment of a Supreme Being as ruler over all. To this should be added a rarely lacking, positive, unequivocal, and constant reverence for the Scriptures. Not that any test of re-

ligious belief is exacted, but I think it will be fair both to those who are inside and those who are outside of these organizations to say that the Bible, taken as the most sacred book of the Christian nations, is a work to which peculiar reverence is always given in fraternal organizations. No other organization of men in the world, with the single exception of the church, so universally, so consistently, and so insistently demands that recognition of divine authority which is at once the test and the evidence of the highest type of life.

It may be urged that the hidden power of the fraternal orders is used at times to influence the course of elections; that men who are members of these organizations band themselves too closely together even outside of their society; that they seek to aid a brother before one not bound by the same oath. While we may make some allowance for weaknesses in this regard upon the part of some, I do not think it follows that, because a man is a member of one of these organizations, he stands ready to stultify himself when he enters the polling booth or when he comes into social or commercial contact with those who are not members of his organization.

It is perhaps quite within bounds to say that these orders are increasing in membership in the United States at the rate of between two hundred and fifty and three hundred thousand members annually. Possibly the vast increase during the last twenty-five years may have been an abnormal one, but the indications all point to a constant augmentation of this enormous secret power. Perhaps in no other country in the world could these orders thrive so constantly and at the same time be so free from any suggestion of national censure. If all their secrets were paraded before the eyes of the world, we should find none directed against the best interests of our country.

W. S. HARWOOD.

A CONSTITUTIONAL MISFIT.

BY GOLDWIN SMITH, D. C. L., LL. D.

AMONG the things which strike a foreign observer of American politics as being among the probable causes of the present troubles, financial and legislative, is the absence of a Parliamentary leadership of party, such as they have in England. The place of the Parliamentary leader of party is here taken, in great measure, by the Boss.

Anglophobia reached its acme and assumed its most grotesque form when a ponderous book was written to prove that American institutions were in their origin not British but Dutch, and had been imported from Holland in the "Mayflower." Of this paradox no proof from institutional peculiarities or political nomenclature was adduced. The only argument was that a nation so barbarous as the England of Burleigh, Walsingham, Sydney, Shakespeare, Bacon, and Hooker could not possibly have been in possession of civilized institutions. A stranger hypothesis it would surely not have been easy to invent than this, that a company of pious peasants in religious exile, with their thoughts absorbed by their spiritual concerns, should have studied the institutions of an alien country, from the social influences of which they seem to have shrunk, with a view of substituting them for their own. That these people clung to their British allegiance the "Mayflower" manifesto shows. Besides, the "Mayflower" Colony had little to do with the political organization of New England; it was absorbed politically in the Massachusetts Colony which came direct from England under the leadership of an English gentleman.

Over one of the cases of the name of a Greek god there is an anomalous accent which formerly puzzled philologists. At last the same accent was found over the same case of the Sanscrit

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name of the corresponding Hindoo divinity. Here was a small but conclusive proof of the connection between the two mythologies. In the American House of Representatives the Chairman, who does not speak, is called the Speaker. So is the Chairman of the English House of Commons, whose original duty it was to speak for the Commons to the Crown.

The Revolutionary fathers would naturally not care to say much about England. But they followed the lines of the British Constitution, substituting, as Republican principles required, for the hereditary King, an elective President, for the hereditary House of Lords an elective, though a comparatively conservative, Senate. They did not see—Blackstone and the constitutional jurists of England did not tell them, the British themselves, even the British politicians were but half aware—that the Constitution had undergone a radical though tacit and informal change; that power instead of being divided among King, Lords, and Commons, had centered in the Commons; that the Crown had been stripped of prerogative and retained nothing but influence; that the House of Lords was no longer a collateral branch of the Legislature, though the Lords still exercised great power through their broad acres, their pocket boroughs, and their control over the county elections. That such was the case, however, had been practically decided when Sir Robert Walpole, the trusted minister and favorite of the Crown, had been compelled to resign office on ceasing to command a majority in the Commons. Thenceforth the government of the country was the political party which was dominant in the House of Commons. The recognized leader of that party chose the Cabinet, and at the same time led the House of Commons either in person or, if he happened himself to be in the House of Lords, through his lieutenant, thus keeping the legislature in harmony with the executive. He and his Cabinet initiated and controlled legislation, managed the finances, regulated the expenditure and determined the taxation, conducted the foreign policy, appointed the judiciary, disposed of all the patronage and answered for the whole administration personally on the floor of the House to the sovereign assembly of representatives of the people. Hamilton, perhaps, had an inkling of the real state of the case when he recognized in patronage—corruption as he called it—a necessary instrument of gov-

ernment. But Washington and all the rest looked upon party not as the regular government, but as a passing disease. In excluding from Congress the heads of the departments of State, they were probably paying a tribute to the purism which had prompted the British Place Bills as well as swayed by the theories of Montesquieu, greater as a prose writer than as a political philosopher, respecting the separation of the executive from the legislative power. "Cabinet" is a term of party government. Washington would not have called the heads of departments a cabinet or recognized them as bearing that character.

Party, however, instead of proving a transient disease, as Washington hoped, had come to stay. It is now the real government of the United States as well as of other countries under the representative system. The British Constitution, as it really was, fitted party government, which had been developed under it. The British Constitution, as it was supposed to be, and in the version in which it was reproduced by the American Constitution-builders, is for party government a misfit.

In England each party has its recognized leaders, who, when it is in power, form the Cabinet; when it is out of power are still its leaders, conserve its principles, regulate its action, and, as the chiefs of Her Majesty's Opposition, with return to office always in view, are hardly less under a sense of responsibility to Parliament and the country than Her Majesty's Ministers. But party in the United States has no such leadership. The President, even if he is a man qualified to lead, not a mere availability, is lifted as the head of the nation out of constitutional connection with his party, the action of which he can control, if at all, only by back-stairs influence. Men of distinction of course there are in both parties, but they are not recognized or responsible leaders; they do not authoritatively shape and control the policy; there are no headquarters like the Carlton and Reform clubs, where the party chiefs are to be found, and are consulted at any crisis by their following. Somebody, however, there must be to keep the organization on foot and to operate the party machine. The Boss becomes a melancholy necessity. There is little sense in reviling him; unspeakable he may be, but he is also indispensable. The Independents—Mugwumps, as the scoffers call them—are eloquent in their denunciation of the Boss. But suppose, instead of being a flying squadron of critics, they were a party

struggling for power and place, how do they think their game could be carried on? That capacity for leadership is not wanting, the marshalling of forces in the different States for such a struggle as the last Presidential election satisfactorily shows. But the status of a permanent and Parliamentary leader is wanting, and the party system of government, questionable enough at best, suffers manifestly in its working by the defect.

In the Legislature no one in particular has legislation in charge; there is no one to initiate it with authority and control its course. The consequence, apparently, is much legislative confusion. Just now we see the railroad arrangements of the country in danger of being thrown out of gear and all railroad property imperilled by a legislative slip, into which it would be hardly possible that a parliamentary leader in England, with the government draftsman at his side, should have been betrayed. The Speaker, it is true, in the House of Representatives acts as a makeshift by nominating the legislative committees; but, to say nothing of the consequences to the impartiality of the Chair, this is an indifferent substitute for a responsible Minister in charge of a bill, framing it, moving it in the name of the government, conducting it through its legislative stages, and defending it against criticism on the floor of the House. Nor is the Speaker or any one else empowered to answer questions and give information in the name of the government, as the Cabinet Ministers in their several departments are in England. The use of the Speaker as a party leader betrays the misfit, against which it is a struggle for adjustment.

It is in the Department of Finance, however, that the defect is most apparent and serious. In England the Chancellor of the Exchequer, representing the government, states the needs of the public service for the coming year, frames the estimates and regulates the appropriations. He only can originate a tax. At Washington expenditure and the tariff are thrown to the crowd. Thus, after thirty-two years of peace, active industry, and productive development, with cheap establishments, a very small army, and almost no navy, in a nation unrivalled for its general faculty of administration, we behold a financial scene of deficit and almost of disaster; while in an old country heavily burdened, we see financial prosperity, surplus, and reduction of debt.

For part of this no doubt the currency mania, or raid, has to

answer; though in England the currency mania itself would probably have been met at the outset with resolute resistance on the part of the Chancellor of the Exchequer and forced to a decisive issue, in which it would most likely have met its doom. For part also, as the Free Traders think, Protectionism has to answer, not only because by limiting imports it diminishes revenue, but because, unless it is much belied, it has prompted a lavish expenditure for the purpose of baling out the surplus and averting the reduction of duties. The Pension Arrears Act under which the country is now paying in pensions for wars, the last of which ended thirty-two years ago, a sum exceeding the cost of the largest standing army in Europe, one hears ascribed not so much to the pressure of the Grand Army or the desire of capturing the soldiers' vote, as to the desire of getting rid of the surplus. It cannot be supposed that the framers of the Act foresaw the fabulous expenditure into which they were plunging the country; but they seem to have legislated blindly where a Parliamentary Finance Minister would have been constrained by his personal responsibility to proceed on a careful calculation.

Some Americans are so sensible of all this that they propose to adopt party government according to the true British model, bringing the heads of the departments, now miscalled Cabinet Ministers, into Congress. But how is this to be done? You would have to recast the whole Constitution and to bring into Congress not the heads of departments only, but the President, who corresponds to the head of the Cabinet in England. The Constitution of the United States is practically unchangeable. Sixty years passed without any amendment. Not only is the process one of extreme difficulty, but there is a lack of any authority strong enough to initiate organic change. In the case of the anti-slavery amendments passed at the close of the Civil War, the initiative was taken by a political earthquake. Constitutions, like every other work of man, wear out, and, as Bacon says, what men do not alter for the better, Time, the great innovator, alters for the worse. But you might almost as well invoke an Avatar of Vishnu as call for an organic amendment of the American Constitution. The article which gives Nevada an equal representation in the Senate with New York is practically immutable.

Besides, we have now to ask the momentous question whether party government after any model, British or American, is the right mark at which to aim, and whether it is destined to be the polity of the future. Men born and bred under the system have learnt to believe that party is an ordinance of nature immemorial and everlasting. The fact is that as a mode of government it dates from the struggle between the Hanoverian constitutionalists and the adherents of Stuart prerogative in the Parliament of England, which again was the Parliamentary continuation of a civil war. A new ground for party was subsequently found in the division of opinion produced in England and other countries by the French Revolution, and by the general struggle between receding monarchy or aristocracy and advancing democracy which ensued. But in ordinary times political opinion is not bisected any more than opinion on other subjects. Party then ceases to have any rational foundation, or to afford any moral justification for the submission of conscience to its yoke. It becomes mere faction, subversive of civil duty, and must be sustained by unreasoning devotion to a shibboleth, or, as it generally is, by corruption of some kind. In legislation and government it allows passion, the most violent and tyrannical, to usurp the place of judgment. In England it has led to reckless extension of the franchise, the two parties bidding against each other in a sort of Dutch auction for the popular vote, and has even, by its influence in regard to the question of Irish Home Rule, brought the United Kingdom to the very brink of disruption. But parties are now being everywhere broken up by the effacement of rational lines of division, by the increase of intelligence and of independence of thought or eccentricity, which multiplies political sects and makes them impatient of party discipline, as well as by the diminution of those means of corruption by which Walpole and Newcastle held their following together. In America the party organizations, owing partly to the influence of a vast patronage, have hitherto been very strong, but they appear now to be giving way. Till last year there had been only eccentric secessions, such as those of the Prohibitionists, the Populists and the Silverites, or revolts against misguidance, such as the revolt of the Liberal Republicans. But at Chicago one of the great organizations was captured by a section at variance with the other section on fundamental principles ; for nothing

could be more opposed to the Jeffersonian belief in individual liberty than the German Socialism of Mr. Altgeld. Democratic reunion seems hopeless ; and how without a Democratic party, or a second party of some kind nearly equal to the Republican party in strength, can the political balance be preserved and the system, which postulates the continued existence of two great parties dividing the nation between them, be carried on ?

A most dangerous result of sectionalism is the power given to self-seeking or fanatical sections, which, when the regular parties are nearly matched in strength, can, by playing on the balance between them, "hold up" the Legislature till their own evil will is done. A gang of political banditti may in this way turn a legislature into its engine. This is a malady newly developed in representative government ; it is manifestly spreading, and no antidote to it at present appears.

The political world generally seems, in fact, to have come to a curious pass. In order to make government by the people, in other words representative government, practicable, there must be an organization of some sort to marshal and direct the popular vote ; since the disconnected atoms have in themselves no power of combination, of interchange of sentiment, or of collective choice. The only organization at present known or discernible is party ; and party, always equivocal, always half condemned by public morality and by its own fruits, is now apparently in a state of final disintegration. What is to come next ? Representative government may be the ideal, but is it capable of being worked ? That is the momentous question to which the next generation may be called upon to give a decisive answer.

To revert to the special case of the United States. We are in the habit of thinking that popular government in America has stood the test of a hundred years and has come well out of the trial. The first member of the proposition at all events requires qualification. During the Washingtonian era the government was not "by the people" ; it was that of a social and political aristocracy, as Jefferson was always complaining. Then Jefferson himself was king. There followed war which always throws power into the hands of government. Presently Jackson was king. Then came the rule of the Democratic party, doubtfully so named, since it was the reverse of democratic and not so much a party as a great economical and social interest, while politically

it was an oligarchy of planters, carrying with it a strong commercial connection in the North and the populace of the Northern cities, which it enlisted by the attraction of the spoils. Its powerful representatives in the Senate held their seats not by popular arts, but by social position, on condition of their fidelity to slavery; they were able to devote themselves to politics; after their kind they were statesmen. They, at all events, governed the country. There were few keener observers than Robert Lowe, who after his return from a visit to America, describing to the present writer what he had seen, and speaking of the Democratic party, deplored its connection with slavery, its violence, and its complicity with corruption at the North, but ended by saying: "However, the Democratic party has governed the country, and I do not see what else there is that could."

The Southern statesmen passed away, and when Lincoln's war dictatorship had come to an end, universal suffrage had a fair trial. The House of Representatives is now composed of men owing their seats to popularity in their several districts, which it must be the first object of each of them to retain. Their tenure is far too short for training in statesmanship, nor can they ever be free to render undivided service to the country at large, local election with its electioneering necessities being ever before their eyes. During a part even of their short term they are practically sitting under the projected shadow of the incoming House, which, if the pendulum of party has swung, practically annuls their legislative power. It is not likely that under such conditions the men will be of the most statesmanlike class. Probably few of them have room in their minds for anything beyond the party game or time to read anything except the newspapers, even the political history of their own country. The position of a Senator is better; but party in its heat has, by the admission of unqualified territories as States for the sake of their Senatorial votes, introduced such elements that the popular House, at least with a strong Speaker, is now the more statesmanlike of the two, while the Senate, instead of restraining excesses, needs itself to be restrained. Mr. Hoar's authority is great, but it cannot cancel recorded facts.

Of the results to statesmanship and to the conduct of legislation and finance since the system of universal suffrage has really prevailed, it rather beseems an American than a foreigner to

speak. But no observer can hesitate to say that since the subsidence of the tidal wave of patriotism which flowed at the time of the Civil War there has been a growing prevalence of local over national feeling and interests. "We are becoming instead of a nation a collection of potato plots and cabbage grounds," was the wail of a patriot whose meaning, at all events, it was not difficult to understand. The people have chosen to impose upon themselves strict localism in elections, so that the ablest and best citizen, if he happens to live where his party is in the minority, is excluded from the councils of the nation. Slavery, though narrower than national, was broader than parochial interest.

In Great Britain the Cabinet, which guides and controls Parliament, is national. Its members, if they are in the House of Commons, are practically sure of seats without limitation of residence. By its influence over the action of Parliament the ascendancy of national interest in legislation, fiscal as well as general, is preserved. In America the President, it is true, is national, especially if he is not a candidate for re-election; and the exercise of his veto has been most wholesome. But his influence is chiefly negative; he can do little to impress his loyalty to national objects upon Congress. National sentiment will hardly regain its ascendancy till some new national aspiration is evolved.

With such conservative and recuperative forces as were shown in the late struggle, anything like despondency would be out of place; but it seems less likely that the nation will be saved by the legislature than that the legislature will be saved by the nation.

GOLDWIN SMITH.

NOTES AND COMMENTS.

PROGRESSIVE INHERITANCE TAXES.

As might have been expected, Comptroller Roberts' modest proposal to make the New York inheritance tax progressive has been attacked in many quarters as dangerous and revolutionary. In reality, it is not revolutionary at all, but a thoroughly sensible proposition, justified both by the theory of justice in taxation as worked out by the best economists, and by the actual experience of several countries. The particular schedule of rates proposed by Mr. Roberts, with its abrupt increase from 5 to 10 and from 10 to 15 per cent., is fairly open to criticism, and has been improved upon in the bill which recently passed the Assembly by unanimous vote. The principle which the Assembly so emphatically indorsed is thoroughly sound.

The theory of progressive taxation has been systematized by Professor Seligman*, who shows that there are several ways of justifying progression, only one of which is at all open to the charge of socialism. The socialists have indeed proposed progressive taxation as a means of securing greater equality of wealth; and in this they have the support of that eminent socialist of the chair, Professor Wagner. But other writers, among whom may be mentioned the late General Walker, have regarded progressive taxation as merely a compensation for those acts and omissions of the State which produce or accentuate inequalities of wealth. This is closely related to the theory that taxation should be progressive because the benefits of government accrue more largely to the rich than to the poor; and it leads naturally to the less general proposition that some taxes at least should be progressive to counterbalance the effect of others which are really in inverse ratio to wealth. Finally, there is the convincing argument upon which economists of the present day chiefly rely, which may be expressed in terms of the Austrian theory of value, or in John Stuart Mill's maxim of "equal sacrifice," or may be put in the simple proposition that ability to pay taxes increases more rapidly than wealth or income. This statement is true both from the standpoint of equal sacrifice, and as a result of the simple rule that the more a man has the more he can get. If we suppose three families with incomes of \$50,000, \$5,000 and \$500 respectively, it is evident that a uniform tax of five per cent. would deprive the first of none but superfluous luxuries, while it might really interfere with the happiness of the second family, and would certainly rob the third of some of the common necessities of life. It is plain that the sacrifice will be very unequal unless the tax is progressive.

* "Progressive Taxation in Theory and Practice," 184; "The Theory of Progressive Taxation," *Political Science Quarterly*, 8:220.

The arguments for progressive taxation in general apply with full force—some of them indeed with added force—in the case of inheritance taxes. Whether progressive taxation is regarded as a compensation for inequalities caused by previous legislation, or simply as the kind of taxation most conformable to the abilities of the tax-payers, it is fully applicable to inheritance taxes; and even if it is regarded as a means of affecting the distribution of wealth, it may be applied to them without any concession to socialism. For a progressive inheritance tax leaves the right of individual possession absolutely untouched; it places no limitation upon wealth, but only upon the inheritance of wealth; in its most severe form it is no step toward equality of fortune, but only toward the individualistic ideal, equality of opportunity. Mr. Andrew Carnegie is no socialist, yet he has more than once declared himself in favor of progressive inheritance taxes far heavier than any which actually exist.* He would have them as heavy as fifty per cent. in the case of large estates, for the purpose of limiting inheritance; though he would be the last to sanction any limitation of wealth.

The inheritance tax in one form or another has come to stay, and new states are being added every year to the list of those which have adopted it. Five years ago it was found in only nine states of the Union: Pennsylvania, Maryland, Delaware, New York, West Virginia, Connecticut, Massachusetts, Tennessee and New Jersey. During the first half of 1893 Ohio, Maine, California and Michigan were added to the list; though the Michigan law was afterward annulled because of an unusual provision in the state constitution which was not complied with. In 1894 Louisiana revived her former tax on foreign heirs, Minnesota adopted a constitutional amendment permitting a progressive inheritance tax which has not yet been given effect by the legislature, and Ohio added to her collateral inheritance tax a progressive tax on direct successions. In 1895 progressive inheritance taxes were adopted in Illinois and Missouri, and an old proportional tax was revived in Virginia; and last year Iowa adopted in part the inheritance tax recommendation of her revenue commission. It will be strange if the legislative sessions of the present year close without one or more new converts to the same principle. All the important countries of Europe employ this method of taxation; and in the most democratic countries of the world outside the United States—Great Britain and her colonies and Switzerland—progressive rates help to make it an important source of revenue. The new English "death duties" claim as much as eighteen per cent. of large estates which pass to distant relatives or by will to strangers in blood. Yet this measure of progressive taxation Lord Playfair commends in the interest of true conservatism.† In this country the inheritance taxes are much lighter, never exceeding five or six per cent.; and even the New York bill, in which the tax on direct successions rises to ten per cent., a little higher than the corresponding English rate, applies only to personal property, so that the tax proposed is really lighter than in England.

In Ohio the progressive tax on direct successions was declared unconstitutional by the State Supreme Court for two reasons: because the \$20,000 exemption was not to be deducted from the amount of taxable estates, and because of the progressive feature. In the first objection the court pointed out a real defect, for there is no equity in taxing an estate of \$20,100 two hundred dollars more than one of \$20,000; but the same criticism would

* NORTH AMERICAN REVIEW, 148:659.

† NORTH AMERICAN REVIEW, 160:285.

apply to many of the state property taxes. As for the second point, the court could find no clause requiring all taxation to be proportional, but by far-fetched construction which to the lay mind appears almost incredible, declared the progressive principle to be in conflict with this section in the bill of rights: "All political power is inherent in the people. Government is instituted for their equal protection and benefit."

In Illinois, where the progressive rates apply not to direct heirs, as in Ohio, but only to collateral and testamentary successions, their constitutionality has been questioned on the strength of the Ohio decision, but the case has not yet been decided by the court of last resort. The decision will be awaited with interest both by the friends and the enemies of progressive taxation, for it may have an important bearing upon the future extension of the principle. It is inconceivable that the Ohio decision alone should be regarded as conclusive by the courts of other States; but if it should be confirmed by a similar decision in Illinois, based perhaps on somewhat sounder reasoning, it would be difficult for progressive taxation to make any headway against two such adverse decisions. The case now pending in Illinois is therefore of importance to the whole country. Fortunately the other objection to the Ohio law has been obviated in Illinois by permitting a certain sum to be deducted from all taxable estates. And the Illinois court can hardly fail to see that the legislature which has power to abolish the right of inheritance altogether must have power to limit the right a little through the agency of taxation; and that progressive taxation is not only economically permissible, but is demanded by equity and the genius of democratic institutions.

MAX WEST.

FOURTH OF JULY CELEBRATIONS AND THE INTERESTS OF BALLOT REFORM.

ALL good citizens must know that times of peace afford opportunity for the display of patriotism quite as valuable to the country, if not so spectacular, as times of war. If "war is hell," then, indeed, that widespread devotion to the welfare of country which preserves domestic tranquillity and honorable peace with foreign nations is far more valuable than that same devotion made effective in bringing destructive war to favorable issue from a national standpoint. To all thoughtful people it must be apparent that the manifestation of patriotism is declining among us. There is a universal self-seeking so urgent that small room is left for thoughts of responsibility to country or posterity. Time was when men sacrificed self for country. Now they sacrifice country for self. Our people are still ready to sacrifice self on the altar of patriotism should a sufficiently urgent occasion be manifested. Such an occasion always exists in the necessity for maintaining our political purity. This can only be accomplished by selecting good and capable men for office from the primary election to the choice for President, and by rendering fraud and corruption impossible. This will be difficult to accomplish, however, so long as there exists among us a large class of venial, indifferent voters, who have never had the real meaning and dignity of voting clearly and forcibly impressed upon them.

Everybody understands that the supreme requirement of republics is a citizenship whose great majority shall be possessed of high moral character and intelligent ideals and these always in evidence at the polls. That a

dangerously large portion of our voters can be purchased, and a much larger number of them are careless of their civic duties, is conceded by all parties. This evil seems to be rapidly growing, and should be checked, or our government and civil institutions will be ruined, and the hands upon the dial-plate of civilization will, as a necessity, be turned backward. Ours is certainly the highest style of government known to civilization for an ideal people.

I am inclined to believe it can be proven to be the worst form of government for a people not prepared for it. Should we sink below a certain level, then the pit into which we shall fall may be bottomless. Our hope must lie in the moral character and patriotic earnestness of the voter. Our fears and cares for the future of our country would be at an end if the worse half of our voters were as good as the better half. Given voters who earnestly, intelligently and conscientiously seek to do right and, though mistakes might occur, our problems of civil government would be solved. Voters can not be made such by legal nor mechanical devices. The work must be back of all these efforts. It must be formative rather than reformatory or prohibitive. To reach and build conscientious citizen rulers is the great and only task worthy of national effort in this direction. In a Republic the voter is a sovereign, and the perpetuity and prosperity of our government demand that this sovereign shall be not only good, but that he shall feel his responsibilities and diligently execute them in righteousness. So far all are agreed, but there seems to be universal perplexity as to the means for compassing this result. Let us look at two facts as a preparation for a suggestion to this end.

First: It must be admitted that we are guilty of gross negligence at a critical point concerning this voter sovereign. We do not crown him. He comes to his vast responsibilities without the slightest public notice, or a hint of a suggestion that the country has any interest in the way he shall discharge his functions. Our culpability, it is true, is modified by the want of a valid precedent upon the part of any nation, and rendered more excusable by the fact that our sovereign is so numerous and widespread, and so constantly and ubiquitously coming to his majority as to almost forbid the thought of a public demonstration over each individual. Nevertheless it is worthy of thought, and "where there is a will there is a way."

Second: There must be universal regret because the Fourth of July has degenerated into a day of desecration, instead of an occasion for the celebration of the greatest event in our history, and one of the greatest in all history, whose significance is by no means duly apprehended by the present generation. Such patriotic sentiments as seek expression are voiced upon Washington and Lincoln's birthdays or on Decoration day. As to Washington's Birthday, it is the wrongtime of the year, being available only for indcorgs and for the few. The other dates are severely suggestive of sectionalism, and concentrate thought upon a historical event which can only admit of incidental reference to the immense ideas clustering about the birth of the Republic. For practical and widespread dissemination of the fundamentals of our government, which, when properly understood, cannot fail to produce an enthusiasm of patriotism, no day is so available as the Fourth of July. The season is ideal for outdoor assemblages, and commemorates at once the climax of human history, for those who incline to retrospection, and the inauguration of the new order of things for those who care to look forward.

Now, putting these two ideas together, viz., our failure to crown our sovereign, and the real merits of the Fourth of July, we are ready for the suggestion, which is, that on the Fourth of July, each year, the young men in any given area—say a county—who have reached their majority between that Fourth and its predecessor, should be invited to a grand banquet, given in honor of their obtaining the right to vote, by public spirited citizens, or at public expense. When assembled together and in the presence of their friends and the general public, they should receive, with a suitable address and from the hands of the most honored and venerable resident of the locality, some distinguishing badge or sash to mark them for that day; be assigned to seats of honor in the assemblage of the people; receive addresses from the most distinguished persons that could be secured, upon those great questions suggested by the inspiring presence of a body of young men so conditioned, and the immortal ideas clustering about the Fourth of July; be assigned to seats of honor at the public dinner, after which post-prandial exercises could, in lighter vein, still emphasize their dignity and the sublime signification of the whole occasion. Any other features, such as athletic sports and fireworks, could be introduced, but always as incidents to the solemnities of the coronation.

Indeed, the outline here suggested could be changed and elaborated to suit any community or condition.

There can be no doubt that the young men would almost unanimously accept the invitation. Their presence, for the purpose of coronation, would inspire the orators of the day to their utmost exertion to do justice to the occasion, and, instead of the customary platitudes characterizing such efforts in the absence of living, practical incentives, the best thoughts of the ages would be tested in the crucible of our times, and moulded in forms of useful attractiveness, and addressed with that enthusiasm which is produced by the expectation of effecting immense results. The immediate effects could not be otherwise than most salutary upon the young men. The sacred honor and vast responsibility of the franchise would mean something after spending such a day at the threshold of manhood. One can scarcely imagine their consenting to be bought, or lending themselves to any form of corruption, after such an induction into their sovereignty as citizens. Moreover, the effect upon the whole community would be of equal value. Boys approaching the period of their majority would be impressed most favorably. Year by year older men would be held face to face with their responsibility, and the crime of trifling with the ballot would be held up to such scorn as would certainly affect them most favorably. Voters and voting days would be more respected. Politics would be purified. Ward heelers and political bosses would lose their vocations. Our grave problems of self-government would possess larger probabilities of immediate and righteous settlement.

The great merit of this suggestion lies in the fact that it has attractions for the very people who ought to be reached.

Then, too, our people at large would have one great worthy holiday devoted to the highest ends and possessed of the noblest means toward those ends. Great crowds would always assemble. The guarantee for that would be the fresh enthusiasm surrounding the new candidates for coronation. Thus good fellowship would be promoted, and it would be no small result if the days of great oratory should return once more.

A. B. RIKER.

MISTAKES ABOUT JUDICIAL PROCEEDINGS IN MEXICO.

It is truly lamentable to see the mistakes often made by able men of this country visiting Mexico regarding our institutions. I recently noticed a serious one about our judicial system, which appeared in the *Lisbon, Ohio, Leader*, of February 18, 1897, in a speech delivered by the Hon. P. M. Smith, in answer to a toast, "The lawyer in Mexico," at a banquet of the Lisbon Bar and county officials, which took place in that city on Wednesday, February 2, 1897. It seems that Mr. Smith had visited Mexico, and seen the holding of a court, very likely in a very small Indian town, where the court "met in an adobe structure, containing a table, three chairs for the judge and lawyers, and a mud bench along the wall covered with cement, without books or file cases." He noticed that no oaths were administered to the witnesses, and without understanding the reason of this omission, he allowed his imagination and humor to get the better of his judgment, and offered the following explanation, showing not only his ignorance of the matter, but his undaunted courage in attempting to explain the meaning of something which he did not understand:

"Oaths were not administered on the theory, I assume, that an oath would add nothing to the natural truthfulness of the Mexican, and if you are liable to be defeated by false testimony of two witnesses for a small consideration, you can secure three to contradict the two, and thus possibly win your case, and aid in securing justice to a worthy litigant."

If Mr. Smith had been better acquainted with the judicial system of Mexico he would have found that prior to 1873 we did administer oaths, as is now done in this country, in all judicial proceedings, and to all public officials on being qualified for their respective offices, and that in that year the oath was replaced by a formal promise to tell the truth. What we called our Laws of Reform, which had been enacted from 1855 to 1859, and which established full liberty of conscience and free exercise of any religious belief, and a complete separation between Church and State, was incorporated in our Constitution in 1873 as an amendment to the same, which made it necessary to suppress the oath, as the oath is a religious act, in which God and the Holy Scriptures are invoked in witness of the truth of a statement made, and it ought not to be required in judicial and other official matters, when some men might consider themselves forbidden by their creed to take an oath, and others look upon it as meaningless. When the oath was replaced by a formal promise to tell the truth, the law provided that said promise should have the same effect as the oath, its breach being punishable as a perjury. That promise is not only required in judicial proceedings, but in every case in which the oath was before administered, that is, in the qualification for public offices, and so forth. Had Mr. Smith taken the pains to understand the subject, he would have avoided the gross mistake alluded to.

Mr. Smith is also mistaken when he asserts "that whenever the authorities in Mexico want to get rid of a person who is obnoxious but does not violate any law that justifies his extermination, he is sentenced to the penitentiary for some criminal act, and while on his way to the prison he is advised by his guards to escape, and that when he attempts to do so, he is shot and reported lost on the road." In disturbed and lawless times, assassinations might have taken place in that manner, as they often do in other countries, because, unfortunately, men invested with authority are sometimes apt to abuse it; but Mr. Smith may be sure that one or two cases that may have

occurred in peaceful times could not justify his assertion, and that any person violating the laws in Mexico is always liable to trial, and to suffer the proper punishment for his offence.

Another of Mr. Smith's errors, although one of less consequence, is his assertion that there is a constitutional provision in Mexico guaranteeing a jury in criminal trials, but that in practice it is unknown. Our Constitution has no such provision, and it is only in the Federal District, by an Act of Congress, that we have established the jury system which is now in force, notwithstanding Mr. Smith's statements. It is a fact that article VII. of our Constitution provided that all offences committed through the press should be tried by a jury, who should decide as to the facts, and, if the accused was convicted, another jury should apply the law and fix the penalty; but the practical result of this system was that no offence of that kind could ever be punished, because the jury always acquitted the accused, and our Constitution was amended on May 15, 1883, abrogating the jury system and submitting the offenders to the common courts, so that now offences committed through the press are tried and punished like crimes of any other character. It is not likely that Mr. Smith could have referred to this occurrence, but even in case he had his information was incorrect.

M. ROMERO.